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 wihin 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 2023

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: Spring 2024

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: Fall 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: Fall 2023
Learning Outcomes: 1. Use a local to global perspective to assess the historical, current and future trends in human health and well-being Audience: Undergraduate

2. Describe the use of planetary boundaries to measure Earth system sustainability and the potential impacts of instability in these systems on global health and human well being Audience: Undergraduate

3. Describe current primary global health challenges, their distribution, and prevention strategies Audience: Undergraduate

4. Analyze global health disparities through a social justice and human rights lens Audience: Undergraduate

5. Demonstrate a basic understanding of contemporary issues, problems, and controversies in global health through an interdisciplinary perspective that recognizes the complex relationships between social, economic, political, and environmental systems. Audience: Undergraduate

6. Analyze ecological perspectives on the connections among human health and well being, animal health, and ecosystem health Audience: Undergraduate

7. Assess and reflect on the successes and failures of global health interventions and become familiar with current events and current literature that describes these efforts Audience: Undergraduate

8. Reflect on personal goals, objectives, and role as a global citizen and future professional or researcher Audience: Undergraduate

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 2024

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 2024

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 2023

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 2024

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 2023

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: Spring 2024

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 2023

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 2024

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
Learning Outcomes: 1. Identify key aspects of climate change and other human-driven environmental changes across the globe in the Anthropocene Audience: Both Grad Undergrad

2. Evaluate the impacts of these changes on biological systems across scales of organization, including individual organisms, populations, communities, and ecosystems Audience: Both Grad Undergrad

3. Explain the importance of feedbacks, interactions, non-linear responses, and irreversible changes in driving ecosystem responses to global change Audience: Both Grad Undergrad

4. Compare and contrast the values and services provided by biological diversity Audience: Both Grad Undergrad

5. Evaluate the role of biodiversity in mitigating or exacerbating the impacts of global environmental change, and in supporting human health and wellbeing Audience: Both Grad Undergrad

6. Critically interpret data and results from primary literature and apply this interpretation to supporting scientific arguments Audience: Both Grad Undergrad

7. Synthesize and critically evaluate scientific claims and hypotheses in global change biology using quantitative data analysis Audience: Graduate

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 2024

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 2023

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 2024
Learning Outcomes: 1. Analyze place-based case studies to understand the complex relationships and connections between human health and the preservation and restoration of our environment. Analysis will link to global and planetary health precepts. Audience: Undergraduate

2. Work within groups to identify and describe complex problems from different and multiple disciplinary perspectives. Audience: Undergraduate

3. Identify and practice methods for designing interventions and making decisions that are informed by systems thinking, understanding of complexity and uncertainty, and planetary health principles. Audience: Undergraduate

4. Work in groups to develop reports and presentations that apply a systems thinking lens to questions related to human health and well-being from multiple perspectives. Audience: Undergraduate

5. Communicate about working strategy/directions, and find and share reliable and appropriate information for the audience indicated (specialists, members of the public, children, etc.) Audience: Undergraduate

6. Reflect on and specify personal goals, values, and ethics as a global (and local) citizen and future professional or researcher, describe how your thinking has evolved over time in your study of global and planetary health. Audience: Undergraduate

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 692 – SENIOR THESIS
1-3 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
Learning Outcomes: 1. Investigate a topic in conjunction with other investigators to develop a deep understanding of a research problem Audience: Undergraduate

2. Identify a research problem and develop a set of testable hypotheses Audience: Undergraduate

3. Carry out analysis of data related to the testable hypotheses Audience: Undergraduate

4. Communicate the results of investigations via written and/or oral means to an appropriate audience Audience: Undergraduate

5. Write an honors thesis that contains an abstract, background, a demonstration of research skills, analysis of the research question, and a summary of the impact of the work Audience: Undergraduate

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 2024

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 2024

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 2024

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: Fall 2023

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 2023

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 2023

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: Spring 2024