# Entomology (ENT)

# ENT 194. Individual Study. 1-3 Credits.

ENT 196. Field Experience. 1-15 Credits.

ENT 199. Special Topics. 1-5 Credits.

# ENT 210. Insects, Humans and the Environment. 3 Credits.

Insect biology and its relevance to humans and the environment. 2 lectures.

ENT 291. Seminar. 1-3 Credits.

# ENT 292. Global Practicum: Study Abroad. 1-15 Credits.

Pre-Arranged study at accredited foreign institutions (study abroad), domestic institutions (National Student Exchange) or on approved study abroad programs. Pre-requisite: Sophomore standing and prior approval by International Student and Study Abroad Services and major department. Graded 'P'or 'F' (Undergraduate), or 'S' or 'U' (Graduate).

#### ENT 294. Individual Study. 1-5 Credits.

ENT 299. Special Topics. 1-5 Credits.

#### ENT 350. General Entomology. 3 Credits.

Fundamental aspects of Entomology, including: insect classification, identification, structure, biology, adaptations, and impact on human society. 2 lectures, 1 two-hour laboratory. F.

#### ENT 379. Global Seminar. 1-6 Credits.

NDSU instructed experience or field study in a foreign country. Conducted in English for residence credit. Pre-requisite: Prior approval by International Student and Study Abroad Services and major department. May be repeated. Standard Grading.

#### ENT 391. Seminar. 1-3 Credits.

#### ENT 392. Global Practicum: Study Abroad. 1-15 Credits.

Pre-Arranged study at accredited foreign institutions (study abroad), domestic institutions (National Student Exchange) or on approved study abroad programs. Pre-requisite: Sophomore standing and prior approval by International Student and Study Abroad Services and major department. Graded 'P'or 'F' (Undergraduate), or 'S' or 'U' (Graduate).

#### ENT 394. Individual Study. 1-5 Credits.

ENT 399. Special Topics. 1-5 Credits.

#### ENT 431. Principles of Insect Pest Management. 3 Credits.

This course focuses on integrated pest management of insects and related arthropods. The course will cover information and tactics relevant to using and developing IPM programs (e.g. pesticides, economic thresholds, biocontrol). Prereq: ENT 350. S (odd years) {Also offered for graduate credit - see ENT 631.}.

#### ENT 470. Insect Ecology. 3 Credits.

This course explores the importance of insects for investigating basic and applied ecological questions. We will primarily use the peer-reviewed literature to look at some of the most important issues in insect ecology. In doing so, we will look at the ecological foundations of these issues, the methods scientists use to research them, and their connections to management. The course will be online and asynchronous with regular deadlines to help maintain progress throughout the semester. Prereq: ENT 350. {Also offered for graduate credit - see ENT 670.}

#### ENT 491. Seminar. 1-5 Credits.

#### ENT 492. Global Practicum: Study Abroad. 1-15 Credits.

Pre-Arranged study at accredited foreign institutions (study abroad), domestic institutions (National Student Exchange) or on approved study abroad programs. Pre-requisite: Sophomore standing and prior approval by International Student and Study Abroad Services and major department. Graded 'P'or 'F' (Undergraduate), or 'S' or 'U' (Graduate).

#### ENT 493. Undergraduate Research. 1-5 Credits.

ENT 494. Individual Study. 1-5 Credits.

#### ENT 496. Field Experience. 1-15 Credits.

ENT 499. Special Topics. 1-5 Credits.

#### ENT 631. Principles of Insect Pest Management. 3 Credits.

This course focuses on integrated pest management of insects and related arthropods. The course will cover information and tactics relevant to using and developing IPM programs (e.g. pesticides, economic thresholds, biocontrol). S (odd years) {Also offered for undergraduate credit - see ENT 431.}.

# ENT 670. Insect Ecology. 3 Credits.

This course explores the importance of insects for investigating basic and applied ecological questions. We will primarily use the peer-reviewed literature to look at some of the most important issues in insect ecology. In doing so, we will look at the ecological foundations of these issues, the methods scientists use to research them, and their connections to management. The course will be online and asynchronous with regular deadlines to help maintain progress throughout the semester. {Also offered for undergraduate credit - see ENT 470.}

ENT 690. Graduate Seminar. 1-3 Credits.

ENT 695. Field Experience. 1-15 Credits.

ENT 696. Special Topics. 1-5 Credits.

# ENT 701. Insect Pest Identification and Management: Corn & Wheat. 1 Credit.

This course provides information about common insect/arthropod pests of corn and wheat in the upper Great Plains of the U.S. It's primarily intended for students with applied interests in entomology, farming, crop consulting, or land management. Topics include insect/arthropod pest identification, biology, feeding damage, and integrated pest management strategies.

# ENT 702. Insect Pest Identification and Management: Soybean & Pulses. 1 Credit.

This course provides information about common insect/arthropod pests of soybean and pulses in the upper Great Plains of the U.S. It's primarily intended for students with applied interests in entomology, farming, crop consulting, or land management. Topics include insect/arthropod pest identification, biology, feeding damage, and integrated pest management strategies.

# ENT 703. Insect Pest Identification and Management: Potatoes & Oilseeds. 1 Credit.

This course provides information about common insect/arthropod pests of potatoes and oilseeds (sunflower) in the upper Great Plains of the U.S. It's primarily intended for students with applied interests in entomology, farming, crop consulting, or land management. Topics include insect/arthropod pest identification, biology, feeding damage, and integrated pest management strategies.

# ENT 741. Insect-Plant Interactions. 3 Credits.

Insect-plant interactions are a key feature of the terrestrial ecology of our planet. The course will cover plant interactions with both herbivores and pollinators, and will emphasize the behavioral mechanisms insects use to exploit plants.

# ENT 750. Systematic Entomology. 5 Credits.

Introduction to systematic methods and principles; identification of common families of insects. F (even years).

#### ENT 760. Insect Structure. 4 Credits.

Structure of insects and physiological functions. The development of adult form from embryonic and larval precursors during growth and metamorphosis; evolutionary development of insect structures. F (odd years).

# ENT 761. Insect Physiology. 4 Credits.

Function of major insect organ systems and metabolism, growth, and molting of insects. S (odd years).

# ENT 770. Writing a Scientific Literature Review. 3 Credits.

Explore how and why to create a scientific literature review in this writing intensive class. Hands-on exercises will help improve scientific writing, peerreview, and self-assessment while working throughout the semester to create your own review.

#### ENT 781. Overview of Entomology. 3 Credits.

This course provides basic information about Entomology and is intended to provide an overview of the topic for students of varying academic and/ or career interests who have not previously had a general Entomology class. Topics include: arthropod (i.e., insects and their relatives) taxonomy and identification, arthropod structure and function, and how arthropods interact in multiple contexts.

ENT 790. Graduate Seminar. 1-3 Credits.

ENT 791. Temporary/Trial Topics. 1-5 Credits.

ENT 792. Graduate Teaching Experience. 1-6 Credits.

ENT 793. Individual Study/Tutorial. 1-5 Credits.

ENT 794. Practicum/Internship. 1-15 Credits.

ENT 795. Field Experience. 1-15 Credits.

ENT 796. Special Topics. 1-5 Credits.

ENT 798. Master's Thesis. 1-10 Credits.

# ENT 898. Continuing Enrollment. 1-9 Credits.

For graduate students who have completed all necessary credits of course work including thesis (798) and dissertation (899) on their approved Plan of Study, but who have not yet completed and submitted their thesis or dissertation. This course does not count towards the credit requirements for the degree and is not financial aid eligible. Department consent required to enroll.

ENT 899. Doctoral Dissertation. 1-15 Credits.