

ENTOMOLOGY MINOR

Program Director: David Hawthorne, Ph.D.

The Entomology minor will provide students with a broad understanding of the form and function of insects, their interactions with people and society, and their role as model species for fundamental and applied research. It is intended for students with an interest in insects and their relatives, whether from professional or avocational perspectives.

Program Learning Outcomes

1. Develop a solid foundation on the structure and function of insects and their relatives within an evolutionary context, including the ability to identify orders and common families of arthropods.
2. Comprehend the diversity of insect species and their ecological roles leading to beneficial and injurious effects on human society and economy.
3. Understand and apply the use of insects as models for scientific endeavors, such as developmental biology, genetics, pest management, and population ecology.
4. Integrate knowledge of insects within a specialized field of science.
5. Understand the need to conserve and restore populations of insects in response to global issues such as biodiversity loss, climate change, food security, and invasive species.

REQUIREMENTS

The minor requires a minimum of 15 course credits, with at least 9 credits at the upper level. No more than 2 courses can count towards both the minor and major.

Required Course:

Course	Title	Credits
BSCI337	Biology of Insects	4

Choose one course from Advanced Entomology:

Course	Title	Credits
BSCI467	Freshwater Biology	4
BSCI480	Arthropod Form and Function	4
BSCI481	Insect Diversity and Classification	4
BSCI483	Insects, Pathogens, and Public Health	3
BSCI487	IPM: Science-Based Decision Making for Sustainable Pest Management	4
BSCI494	Animal-Plant Interactions	3
BSCI497	Insect Pests of Ornamentals and Turf	4

Choose a total of 2-3 courses from two of the following areas (for BSCI majors, one course must be from III-IV):

I. Advanced Biology

Course	Title	Credits
BSCI361	Principles of Ecology	4
BSCI363	The Biology of Conservation and Extinction	3
BSCI370	Principles of Evolution	3
BSCI392 & BSCI393	Biology of Extinct Animals and Biology of Extinct Animals Laboratory	4

BSCI410	Molecular Genetics	3
BSCI430	Developmental Biology	3

II. Pollination Biology

Course	Title	Credits
BSCI121	Beekeeping	2
BSCI126	Pollinators in Crisis	3

III. Plant Sciences

Course	Title	Credits
PLSC205	Introduction to Turf Science and Management	4
PLSC226	Plant Diversity	4
PLSC253	Woody Plants for Mid-Atlantic Landscapes I	3
PLSC254	Woody Plants for Mid-Atlantic Landscape II	3
PLSC405	Agroecology	3
PLSC407	Advanced Crop Science	3
PLSC420	Principles of Plant Pathology	4
PLSC453	Weed Science	3

IV. Environmental Sciences:

Course	Title	Credits
ENST233	Introduction to Environmental Health	4
ENST333	Ecosystem Health and Protection	3
ENST334	Environmental Toxicology	3
ENST360	Ecosystem Ecology	4
ENST403	Invasive Species Ecology	3
ENST410	Ecosystem Services: An Integrated Analysis	3
ENST436	Emerging Environmental Threats	3
ENST441	Sustainable Agriculture	3
ENST445	Ecological Risk Assessment	3
ENST450	Wetland Ecology	3

Depending on the optional courses, a total of 15-17 credits are required. All courses presented for the minor must be passed with a grade of C- or better.