ENTOMOLOGY MINOR

Program Director: Tammatha O'Brien, 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    Biology of Extinct Animals                    4
& BSCI393   and Biology of Extinct Animals Laboratory    4

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.