

Entomology

College of Agriculture, Food & Environment

The Department of Entomology offers graduate work leading to the Master of Science (Plan A -- Thesis and Plan B -- Non-thesis) and the Doctor of Philosophy degrees. Individual graduate programs are planned by students in consultation with their advisory committee and the Director of Graduate Studies. Entomology, like all agricultural and biological sciences disciplines, continues to evolve and integrate state of the art technology and new research perspectives with insect biology. Although departmental research is unified by a focus on insects and their arthropod relatives, many research groups creatively merge aspects of basic and applied biology. Graduate study and research opportunities are available in a diverse range of areas of entomology, including agricultural and urban entomology, biological control and integrated pest management, medical, veterinary, and public health entomology, pollinator biology and insect-plant relationships, forest entomology, and arachnology. Research covers many major fields of biology including behavior, biochemistry, ecology (including evolutionary, urban, landscape, and general ecology), genetics, neuroscience, molecular biology, physiology, toxicology, and systematics.

Admission Requirements

Minimum admission requirements include an overall undergraduate grade point average of 3.0 and an overall graduate grade point average of 3.25. Applicants whose native language is English must score at least 300 on the combined verbal and quantitative portions of the Graduate Record Examination (GRE) general test. Those whose native language is not English must have a Test of English as a Foreign Language (TOEFL) with a minimum score of 79 on the TOEFL iBT. A minimum overall band score of 6.5 on the International English Language Testing System (IELTS) may be used in lieu of a TOEFL score. They must also have a score of 150 on the quantitative portion of the GRE. The Program requires three letters of recommendation. Meeting the minimum requirements does not guarantee admission. These minimum requirements may be waived in exceptional cases if sufficient additional evidence is presented regarding the ability of the student to do graduate work. Admission to the Graduate Program in Entomology does not automatically guarantee financial assistance to the student.

Degree Requirements

During their first year of graduate studies, M.S. (Plan A) and Ph.D. students are required to prepare a formal written research proposal encompassing a thorough literature review, clear statement of objectives, and materials and methods of the project. A research proposal seminar will be presented to the Department upon completion of the written research proposal. An exit seminar, usually presented during the last semester of the student's tenure, is required for M.S. (plans A and B) and Ph.D. students. August graduates will present their seminar in the preceding spring. M.S. students using the Plan B option will be required to provide a detailed outline of their practicum to their Advisory Committee. The practicum must be a minimum of 3 credit hours (maximum of 6 credit hours) and may consist of library research, special problems, internships, etc., as agreed upon by the student and major professor, and approved by the Advisory Committee.

All M.S. and Ph.D. students must satisfy the following core course requirements:

1. An undergraduate course in general entomology. Students who have not had such a course before enrolling in the Entomology graduate program must take ENT 300.
2. STA 570 (Basic Statistical Analysis) or equivalent, or a different statistics course approved by the student's advisory committee
3. Each M.S. student must take two semesters of ENT 770, Entomological Seminar, (or approved

equivalent seminars) and Ph.D. candidates must take four semesters of approved seminars.

4. Ph.D. and M.S. candidates using the Plan A option must take a minimum of one course from two of the following core areas. M.S. candidates using the Plan B option must take a minimum of one course from all three core areas.

Core Area 1: Insect Behavior, Ecology, Evolution and Systematics.

ENT 564	Insect Taxonomy
ENT 568	Insect Behavior
ENT 607	Advanced Evolution
ENT 625	Insect-Plant Relationships
ENT 660	Immature Insects
ENT 665	Insect Ecology
ENT 667	Invasive Species Biology

Core Area 2: Insect Molecular Biology, Physiology and Genetics.

ENT 635	Insect Physiology
ENT 636	Insect Molecular Biology

Core Area 3: Pest Management and Applied Ecology.

ENT 530	Integrated Pest Management
ENT 561	Insects Affecting Human and Animal Health
ENT 574	Advanced Applied Entomology
ENT 680	Biological Control

In all cases, an equivalent graduate level course from another institution is acceptable upon approval of the Advisory Committee. Such approval will not decrease the minimum number of credits required, but simply will permit the student to take other courses.

Graduate Courses

ENT 530	Integrated Pest Management	(3)
ENT 561	Insects Affecting Human And Animal Health (Same As BIO 561)	(3)
ENT 564	Insect Taxonomy (Same As BIO 564)	(4)
ENT 568	Insect Behavior (Same As BIO 568)	(3)
ENT 574	Advanced Applied Entomology	(4)
ENT 605	Empirical Methods In Ecology And Evolution (Same As BIO/FOR 605)	(2)
ENT 606	Conceptual Methods In Ecology And Evolution (Same As BIO/FOR 606)	(3)
ENT 607	Advanced Evolution (Same As BIO/FOR607)	(2)
ENT 608	Behavioral Ecology And Life Histories (Same As BIO/FOR 608)	(2)
ENT 609	Population And Community Ecology (Same As BIO/FOR 609)	(2)
ENT 613	Behavioral Ecology And Comparative Neurobiology (Same As BIO/PSY/PGY/ANA 613)	(2)
ENT 614	Techniques In Behavioral Ecology And Comparative Neurobiology (Same As BIO/PSY/PGY/ANA 614)	(2)
ENT 625	Insect-Plant Relationships (Same As BIO 625)	(3)
ENT 635	Insect Physiology (Same As BIO 635)	(4)
ENT 636	Insect Molecular Biology	(4)
ENT 660	Immature Insects	(3)

ENT 665	Insect Ecology (Same As BIO 665)	(3)
ENT 667	Invasive Species Biology (Same As BIO/FOR 667)	(3)
ENT 680	Biological Control	(3)
ENT 684	Phylogenetic Systematics (Same As BIO 684)	(3)
ENT 695	Special Topics In Entomology (Subtitle Required)	(3)
ENT 748	Master's Thesis Research	(0)
ENT 767	Dissertation Residency Credit	(2)
ENT 768	Residence Credit For The Master's Degree	(1-6)
ENT 770	Entomological Seminar	(1)
ENT 780	Special Problems In Entomology And Acarology	(2-3)
ENT 790	Research In Entomology And Acarology	(1-6)