Graduate Minor in Entomology

Coordinator for Graduate Minor: Reed Johnson, Johnson.5005@osu.edu

Rationale statement: The Graduate Minor in Entomology is based on entomological coursework and is available to any student enrolled in a MS or Ph.D. degree in any department other than entomology at the Ohio State University. There is a need for such a minor because many students are now looking for a broader training beyond their majors. Entomology is an excellent choice for a graduate minor because it can provide job opportunities for graduates as specialists in Entomology and also because insects serve as excellent model systems for fundamental research. This graduate minor will be of particular interest to students enrolled in graduate programs in Horticulture and Crop Science, Plant Pathology, the School of Environment and Natural Resources, Animal Sciences, the medical and veterinary schools, and the Environmental Science Graduate Program (ESGP). For example, ESGP students who work with entomology faculty would benefit tremendously from the entomology minor because they would acquire more fundamental knowledge about insects and how to work with them. Such disciplinary depth is expected of all interdisciplinary scientists according to a recent study on interdisciplinary training by the National Academies of Sciences. Our entomology courses have been designed to provide a solid understanding of entomology to graduate students both in Entomology and in other degree programs.

Curriculum: All students seeking a Graduate Minor in Entomology will take a minimum of 10 credit hours of coursework, including two required courses in General Entomology and the remainder from elective courses as listed in Table 1. At least one elective must be at the 6000-level or higher. Any student who has previously taken general entomology must take 10 credit hours of elective entomology courses, including at least one at the 6000-level or higher.

Table 1: Courses for the graduate minor in Entomology.

Status	Course	Title	Credits	Term*
required	ENTMLGY 4000	General Entomology Lecture	3	AU, SP
required	ENTMLGY 4001	General Entomology Laboratory	1	AU, SP
elective	ENTMLGY 4440H	Honors Social Insects	3	SP
elective	ENTMLGY 4601	General Insect Pest Management	2	AU
elective	ENTMLGY 4607	Veterinary Entomology	2	AU, SP
elective	ENTMLGY 5001	Entomological and Environmental Approaches to Fly Fishing	3	AU
elective	ENTMLGY 5060	Practical Experiences in Plant Health: Insects & Diseases of Plants	2	SU
elective	ENTMLGY 5110	Ecology and Management of Pathogens and Insects Affecting Trees in Forest and Urban Environments	3	SP (odd years)
elective	ENTMLGY 5350.01	Taxonomy and Behavior of Aquatic Invertebrates	3	AU (even years)
elective	ENTMLGY 5490	Insect Behavior: Mechanisms and Function	3	SP (odd years)
elective	ENTMLGY 5500	Biological Control of Arthropod Pests	3	SP
elective	ENTMLGY 5600	Principles and Applications of Integrated Pest Management	3	SP
elective	ENTMLGY 5604	Capstone course: Problem-Based Studies in Plant Health	2	SP
elective	ENTMLGY 5605	Vector Biology and Vector Borne Diseases	3	AU
elective	ENTMLGY 5608	Turfgrass Insect and Mite Pests	2	SP
elective	ENTMLGY 5609	Landscape Ornamental Plant Insect and Mite Pests	3	SP

Table 1 continued

Status	Course	Title	Credits	Term*
elective	ENTMLGY 5610	Greenhouse Plant Health and Management	3	AU
elective	ENTMLGY 5800	Pesticide Science	3	AU, SP
elective	ENTMGLY 6193	Individual Studies	1-3	AU, SP. SU
elective	ENTMLGY 6210	Evolution and Diversity of Insects	4	SP (odd years)
elective	ENTMLGY 6310	Insect Physiology and Molecular Biology	3	AU (odd years)
elective	ENTMLGY 6320	Experimental Insect Physiology and Molecular Biology	1	AU (odd years)
elective	ENTMLGY 6410	Insect Ecology and Evolutionary Processes	3	AU (even years)
elective	ENTMLGY 6703	Molecular Techniques and Data Analysis	2	SP (even years)

* Term: AU = autumn, SP = spring; SU = summer