Graduate Program in Entomology *(approved by entomology faculty 26 July 2017)*

All M.S. and Ph.D. students are required to take all four of the following entomology fundamentals courses (11 credits):

Course	Title	Credits	Term
ENTMLGY 6210	Evolution and Diversity of Insects	4	spring of odd years
ENTMLGY 6310	Insect Physiology and Molecular Biology	3	autumn of odd years
ENTMLGY 6320	Experimental Insect Physiology and Molecular Biology	1	autumn of odd years
ENTMLGY 6410	Insect Ecology and Evolutionary Processes	3	autumn of even years

All M.S. and Ph.D. students are required to take all three of the following professional development courses (6 credits):

Course	Title	Credits	Term
ENTMLGY 7910	The Nature and Practice of Science	2	spring of even years
ENTMLGY 7920	Presentation Skills for Scientists	2	spring of odd years
ENTMLGY 7930	Scientific Writing and Grant Proposal Development	2	autumn of odd years

M.S. and Ph.D. students are required to take all four of the following supplemental training courses, to instill an understanding of the breadth of the discipline of entomology, and to ensure that students can analyze and interpret data (minimum of 4 credits, plus research credits):

Course	Title	Credits	Term
ENTMLGY 8000	Entomology Seminar [a]	1	autumn & spring
ENTMLGY 8800	Research and Training Seminar [b]	1	autumn
ENTMLGY 8999	Research [c]	(various)	autumn, spring, summer
(various; see Appendix 2)	One course in statistics or data analysis or experimental design (must be upper level [4xxx or higher])	Minimum of 2	(various)

[a] Students are encouraged to enroll in Entomology Seminar every semester, but it is required only once.
[b] Students should enroll in Research and Training Seminar the first Autumn semester of their graduate program.
[c] Research credits are needed for M.S.-Plan A and Ph.D. students but not for M.S.-Plan B students.

Note that petitions to the Graduate Studies Committee can be made to exclude or replace any required course if the student can provide evidence of a similar course taken at OSU or elsewhere.

In addition to the above requirements, students may choose elective courses based on their interests or recommendations by their advisory committees. These electives may include any of the entomology courses at the 5000 level or higher, or courses offered in other units at the 4000 level or higher. Electives offered by our unit are listed in Appendix 1 on page 2. We no longer offer our own course in Systems Analysis, but we strongly recommend that our students take a course in systems analysis as offered by other departments, such as one of those shown in Appendix 3 on page 2.

In addition to course requirements, all entomology Ph.D. students are required to assist in teaching one course in entomology or introductory biology, either as an employed Graduate Teaching Associate, or by enrolling in our ENTMLGY 6501 (Mentored Teaching) course.

The minimum total number of semester credit hours required for Entomology is 80 for Ph.D., 30 for M.S.
Total number of required course credits, excluding research credits is 21 for Ph.D.; 21 for M.S.
Number of credit hours for research and electives is 59 for Ph.D.; 9 for M.S.

Guidelines for number of credit hours per term:

Program & status	Position	Term	Minimum required by Graduate School	Recommended by Dept. of Entomology
M.S. & Ph.D., pre-candidacy	Graduate Teaching (GT) and Research Associates (GA)	autumn or spring	8	16
		summer	4	8
	Graduate Fellow	autumn or spring	12	16
		summer	6	8
Ph.D., post-candidacy	Any	autumn or spring	3	3
		summer	3	3

Appendix 1: Electives offered by the Department of Entomology

Course	Title	Credits	Term
ENTMLGY 5001	Entomological and Environmental Approaches to Fly Fishing	3	autumn
ENTMLGY 5110	Ecology and Management of Pathogens and Insects Affecting Trees in Forest and Urban Environments	3	spring of odd years
ENTMLGY 5130	Field Insect Taxonomy	3	summer
ENTMLGY 5420	Insect Behavior: Mechanisms and Function	3	spring of odd years
ENTMLGY 5500	Biological Control of Arthropod Pests	3	spring
ENTMLGY 5600	Principles and Applications of Integrated Pest Management	3	spring
ENTMLGY 5604*	Capstone Course: Problem-Based Studies in Plant Health	3	spring
ENTMLGY 5605	Human Health Entomology	2	(under revision)
ENTMLGY 5608	Turfgrass Insect and Mite Pests: Identification, Biology and Management	2	spring
ENTMLGY 5800	Pesticide Science	3	autumn
ENTMLGY 6193*	Individual Studies	1-6	autumn, spring, summer
ENTMLGY 6194*	Group Studies	1-3	autumn, spring, summer
ENTMLGY 6501*	Mentored Teaching in Entomology	1-3	autumn, spring
ENTMLGY 6502*	Mentored Extension Experience in Entomology	1-3	autumn, spring, summer
ENTMLGY 6703	Molecular Techniques and Data Analysis	2	spring of even years
ENTMLGY 7300*	Plant Health Management Seminar	1	autumn
ENTMLGY 7890*	Special Topics	1-3	autumn, spring

* course that would not count towards electives for M.S.-plan B students.

Appendix 2: List of some choices for a course in statistics, data analysis, or experimental design*

Course #	Course Name	Credits	Term	Pre-requisite
STAT 5301	Intermediate Data Analysis I	4	autumn, spring	Math 1075 or instructor permission
STAT 5302	Intermediate Data Analysis II	3	autumn, spring	STAT 5299, 5301, or instructor permission
STAT 6450	Applied Regression Analysis	4	autumn	STAT 6201, or equivalent
STAT 6530	Introduction to Spatial Statistics	2	spring	STAT 6450, 6950, or Geog 883.02; or instructor permission
STAT 6620	Environmental Statistics	2	spring (?)	STAT 5302, 6450, 6910, or Geog 683 or 833.01; or instructor permission
MOLGEN 5650	Analysis and Interpretation of Biological Data	3	autumn	Math 1149 or 1150 or equiv.
HCS 5887	Introduction to Experimental Design	3	autumn	HCS2260 or other GE data class; or grad standing
HCS 8887	Techniques of Experimental Design	4	spring	MolGen 5650; and STAT 5301 or 5299
PLNTPTH 8300	Special Topics: statistics	2	spring	none
ENR 8780	Quantitative Methods for Environment and Natural Resources	3	spring	STAT 5302 or equiv., and grad standing; or instructor permission
ANIMSCI 7000	Applied Biometrics	3	autumn	STAT 5301 or equiv.
GEOG 5100	Spatial Data Analysis	3	autumn	STAT 1450 or above

*note, enrollment in STAT 5760, Statistical Consulting Support, does not fulfill this requirement.

Appendix 3: List of some choices for a course in systems analysis; others also possible.

Course #	Course Name	Credits	Term
GEOG 5226	Spatial Simulation and Modeling in GIS	3	autumn
EEOB 7220	Modeling in Evolutionary Ecology	4	autumn
VETPREV 8830	Modeling Transmission Processes and Control of Infectious Diseases in Humans and Animals	3	??
PUBH-EPI 5421	Mathematics of Infectious Disease Dynamics	3	spring
PlantPath 7002	Plant Disease Epidemiology	3	spring