

# Graduate Curriculum - Entomology

Draft for incoming Fall 2022 students

## Doctor of Philosophy (PhD) and Master of Science (MS)

The curriculum for students seeking a PhD or MS in Entomology is composed of an individualized blend of required and selective coursework. Students are encouraged to explore their field of study and develop an academic program that broadly reflects their interests.

Our course curriculum allows for a unique blend of ENTM Core and Special Topics Courses to fit each student's needs. ENTM Core Courses (3-4 cr.) can include a mixture of lectures, student-led discussions and/or student presentations. These Core Courses are aimed at developing critical thinking, synthesis and communication of key concepts/scientific knowledge, and in-depth understanding of foundational theory. In addition, students take Special Topics Courses (1-2 cr.) that complement the Core Courses and are designed to focus on emerging areas or "hot topics" in entomology. These Special Topics Courses typically focus on research published within the last 5 years and are often discussion-based and/or involve student presentations, although course structure can vary. ENTM Core Courses are taught regularly, while Special Topics Courses are rotated among faculty in the department and are often only taught once.

Students will also be challenged through a range of academic pursuits that include the development of a written research proposal describing their project (all students), a rigorous written and oral candidacy examination (for PhD students only), and successful defense of the thesis/dissertation (all students). **A total of 30 (MS) or 90 (PhD) credit hours, including research credits, are required for the degree.**

Although scheduling of courses is up to the student and their advisor, students generally complete coursework early in the degree to focus on research later in the program.

**Failure to complete the curriculum as described will result in rejection of the plan of study (POS).** If you have any questions or concerns, please contact Ian Kaplan (ikaplan@purdue.edu) or Amanda Wilson (apendle@purdue.edu).

Required Courses		No. credit hrs	Semester offered
<b>Ethics</b>			
GRAD 61200	Responsible Conduct in Research (variable)	1 cr	Fall & Spring
<b>Entomology</b>			
ENTM 60000	Graduate Student Orientation (Cameron)	1 cr	Fall
ENTM 60200*	Insect Biology (Yaninek)	3 cr	Fall

*\*Required only of students with no prior coursework in general entomology*

Core Selective Courses		No. credit hrs	Semester offered
<b>Entomology</b> (PhD, select 3; MS, select 2)			
ENTM 50800	Integrative Insect Taxonomy (Smith)	4 cr	Fall even years
ENTM 52500	Medical & Veterinary Entomology (Hill)	3 cr	Spring odd years

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ENTM 61000	Insect Pest Management (Krupke)	3 cr	Fall even years
ENTM 61100	Toxicology of Insecticides (Pittendrigh)	3 cr	Spring even years
ENTM 6XX	Biological Control (Yaninek)	3 cr	Spring odd years
ENTM 6XX	Insect Genomics (Harpur)	3 cr	Spring odd years

### Statistics (select 1)

STAT 50300	Statistical Methods for Biology (variable)	3 cr	Fall & Spring
BIOL 58210	Ecological Statistics (Fernandez-Juricic)	3 cr	Fall
ENTM 64200	Analysis of Ecological Data (Holland)	3 cr	Spring odd years
FNR 64700	Quant. Methods for Ecologists (Swihart)	3 cr	Fall odd years

### Special Topics (PhD, select 2; MS, select 1)

ENTM 69200**	Special Topics in Entomology	variable	Fall & Spring
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*\*\*See page 3-4 for course titles, availability and instructor*

Professional Development		No. credit hrs	Semester offered
<b>Coursework (select 1)</b>			
ENTM 60900	Scientific Writing (Enders & Kaplan)	1 cr	Fall even years
GRAD 55000*	Fellowship & Grant App Writing (Nielsen)	1 cr	Fall
GRAD 59000*	Fellowship & Grant App Writing (Nielsen)	1 cr	Spring
GRAD 59000	Preparing Future Faculty (variable)	1-3 cr	Fall
GRAD 59000	Scientific Communication for the Engaging Researcher (Mason)	2 cr	Spring

*\*Grant app writing (Nielsen) has been taught as both GRAD 550 and GRAD 590*

### Options for Non-ENTM Grad Courses & Additional Coursework

Taking additional coursework—either in entomology or other departments in the college—above and beyond the curriculum outlined above is perfectly acceptable and, in some cases, encouraged. Additional coursework should be discussed and approved by the student's advisory committee before submitting a plan of study (POS). Graduate students may include up to 6 credits worth of 300- or 400-level coursework on their POS, in addition to their 500- and 600-level classes.

Courses with similar content taken as part of an earlier degree program cannot be used to fulfill MS or PhD program requirements.

MS students are required to take 2 ENTM Core Selective Courses from the list above and may not substitute courses from other departments to fulfill this requirement. PhD students may substitute one of their 3 ENTM Core Selective Courses from another department; however, it must be a 3-4 cr. graduate level course that has been approved by the student's advisory committee.

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## Schedule of Courses

Reflects known course offerings as of Spring 2020. Course listings are subject to change.

2-3 courses	4 (MS) or 6 (PhD) courses			1 course
Required	Entomology (2-3)	Statistics (1)	Special Topics (1-2)	Professional Development

Fall 2022			
Course #	Credits	Instructor	Course Title
ENTM 60000	1	Cameron	Graduate Student Orientation
ENTM 60200	3	Yaninek	Insect Biology
GRAD 61200	1	variable	Responsible Conduct in Research
ENTM 61000	3	Krupke	Insect Pest Management
ENTM 50800	4	Smith	Integrative Insect Taxonomy
STAT 50300	3	variable	Statistical Methods for Biologists
BIOL 58210	3	Fernandez-Juricic	Ecological Statistics
ENTM 69200	1	Baributsa	International Ag
ENTM 60900	1	Enders/Kaplan	Science Writing
GRAD 55000	1	Nielsen	Fellowship & Grant Application Writing
GRAD 59000	2	Morgan	Preparing Future Faculty

Spring 2023			
Course #	Credits	Instructor	Course Title
GRAD 61200	1	variable	Responsible Conduct in Research
ENTM 52500	3	Hill	Medical & Veterinary Entomology
ENTM 6XX	3	Yaninek	Biocontrol
ENTM 6XX	3	Harpur	Insect Genomics
STAT 50300	3	variable	Statistical Methods for Biologists
ENTM 64200	3	Holland	Analysis of Ecological Data
ENTM 69200	1	Richmond	Experimentation and Analysis
GRAD 59000	2	Mason	Scientific Communication for the Engaging Researcher

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Fall 2023			
Course #	Credits	Instructor	Course Title
ENTM 60000	1	Cameron	Graduate Student Orientation
ENTM 60200	3	Yaninek	Insect Biology
GRAD 61200	1	variable	Responsible Conduct in Research
STAT 50300	3	variable	Statistical Methods for Biologists
BIOL 58210	3	Fernandez-Juricic	Ecological Statistics
FNR 64700	3	Swihart	Quantitative Methods for Ecologists
ENTM 69200	1	Pittendrigh	TBD
GRAD 55000	1	Nielsen	Fellowship & Grant Application Writing
GRAD 59000	2	Morgan	Preparing Future Faculty

Spring 2024			
Course #	Credits	Instructor	Course Title
GRAD 61200	1	variable	Responsible Conduct in Research
ENTM 61100	3	Pittendrigh	Toxicology of Insecticides
STAT 50300	3	variable	Statistical Methods for Biologists
ENTM 69200	1	Holland	Synthesis in Ecology
GRAD 59000	2	Mason	Scientific Communication for the Engaging Researcher