

# ENTOMOLOGY: INSECT BIOLOGY AND ECOLOGY, BSAG

**Requirements for Students Matriculating in or before Academic Year 2020-2021.** Learn more about University Academic Regulation 3.1 (<http://catalog.okstate.edu/university-academic-regulations/#matriculation>).

**Minimum Overall Grade Point Average: 2.00**

**Total Hours: 120**

Code	Title	Hours
<b>General Education Requirements</b>		
<i>English Composition</i>		
See Academic Regulation 3.5 ( <a href="http://catalog.okstate.edu/university-academic-regulations/#english-composition/">http://catalog.okstate.edu/university-academic-regulations/#english-composition/</a> )		
ENGL 1113	Composition I	3
or ENGL 1313	Critical Analysis and Writing I	
Select one of the following:		3
ENGL 1213	Composition II	
ENGL 1413	Critical Analysis and Writing II	
ENGL 3323	Technical Writing	
<i>American History &amp; Government</i>		
Select one of the following:		3
HIST 1103	Survey of American History	
HIST 1483	American History to 1865 (H)	
HIST 1493	American History Since 1865 (DH)	
POLS 1113	American Government	3
<i>Analytical &amp; Quantitative Thought (A)</i>		
Select one of the following:		3
MATH 1483	Mathematical Functions and Their Uses (A)	
MATH 1513	College Algebra (A) <sup>1</sup>	
MATH 1613	Trigonometry (A) <sup>1</sup>	
MATH 2103	Business Calculus (A) <sup>1</sup>	
<i>Humanities (H)</i>		
Courses designated (H)		6
<i>Natural Sciences (N)</i>		
Must include one Laboratory Science (L) course		
BIOL 1114	Introductory Biology (LN) <sup>1</sup>	4
CHEM 1314	Chemistry I (LN) <sup>1</sup>	4
or CHEM 1215	Chemical Principles I (LN)	
<i>Social &amp; Behavioral Sciences (S)</i>		
Course designated (S)		3
<i>Additional General Education</i>		
Courses designated (A), (H), (N), or (S)		8
<b>Hours Subtotal</b>		<b>40</b>
<b>Diversity (D) &amp; International Dimension (I)</b>		
May be completed in any part of the degree plan		
Select at least one Diversity (D) course		
Select at least one International Dimension (I) course		
<b>College/Departmental Requirements</b>		
<i>Agricultural Sciences and Natural Resources</i>		

Ferguson College of Agriculture course cannot be used here and as an (N)		
AG 1011	First Year Seminar	1
AGEC 1113	Introduction to Agricultural Economics (S)	3
ENTO 2993	Introduction to Entomology (LN)	3
STAT 2013	Elementary Statistics (A)	3
Select one of the following:		3
ANSI 1124	Introduction to the Animal Sciences	
BIOC 2344	Chemistry and Applications of Biomolecules	
ENVR 1113	Elements of Environmental Science	
FDSC 1133	Fundamentals of Food Science	
HORT 1013	Principles of Horticultural Science (LN)	
LA 1013	Introduction to Landscape Architecture and Landscape Management	
NREM 1014	Introduction to Natural History (LN)	
NREM 1113	Elements of Forestry	
NREM 2013	Ecology of Natural Resources	
PLNT 1213	Introduction to Plant and Soil Systems	
SOIL 2124	Fundamentals of Soil Science (N)	
<i>Written and Oral Communications</i>		
Select one of the following:		3
AGCM 3103	Written Communications in Agricultural Sciences and Natural Resources	
BCOM 3113	Written Communication	
BCOM 3443	Business Communication for International Students	
ENGL 3323	Technical Writing <sup>2</sup>	
Select one of the following: <sup>3</sup>		3
AGCM 3203	Oral Communications in Agricultural Sciences & Natural Resources (S)	
SPCH 2713	Introduction to Speech Communication (S)	
SPCH 3733	Elements of Persuasion (S)	
<b>Hours Subtotal</b>		<b>19</b>
<b>Major Requirements</b>		
With approval from the advisor and the department head, a maximum of 30 hours of science courses from an accredited doctoral health program may be substituted for major requirements other than the ENTO core courses of eight hours.		
<i>Core Courses</i>		
Select 8 hours of the following:		8
ENTO 3044	Insect Morphology and Physiology	
ENTO 4464	Insect Biology and Classification	
<i>Additional Entomology</i>		
ENTO 4800	Entomology Practicum	3
Any entomology or plant pathology course not taken as a core course		12
<i>Related Courses</i>		
Genetics:		
Select one of the following:		3
BIOL 3023	General Genetics	
PLNT 3554	Plant Genetics and Biotechnology	
ANSI 3423	Animal Genetics	
Ecology:		

Select one of the following:	3
BIOL 3034 General Ecology	
NREM 4033 Ecology Of Invasive Species	
Chemistry:	
CHEM 1225 Chemical Principles II (LN) <sup>1</sup>	5
or CHEM 1515 Chemistry II (LN)	
Select one of the following:	3
BIOC 3653 Survey of Biochemistry	
CHEM 3015	
CHEM 3053 Organic Chemistry I	
Select 24 hours of the following:	24
BIOC 2344 Chemistry and Applications of Biomolecules	
BIOC 3653 Survey of Biochemistry	
BIOL 1604 Animal Biology	
ENTO 2003 Insects and Society (N)	
ENTO 2223 Insects in Global Public Health (N)	
ENTO 3003 Livestock Entomology	
ENTO 3021 Postharvest, Structural, and Urban Arthropod Pests	
ENTO 3331 Insect Pests of Agronomic Crops	
ENTO 3421 Horticultural Insects	
ENTO 3461 Insects in Forest Ecosystems	
ENTO 3501 Entomology for Educators	
ENTO 3663 Turfgrass Integrated Pest Management	
ENTO 4223 Ecological Methodology	
ENTO 4400 Special Topics	
ENTO 4484 Aquatic Entomology	
ENTO 4733 Insect Behavior and Chemical Ecology	
ENTO 4854 Medical and Veterinary Entomology	
ENTO 4923 Applications of Biotechnology in Pest Management	
HORT 3153 Turf Management	
HORT 3084 Plant Propagation	
NREM 2013 Ecology of Natural Resources	
NREM 3063 Natural Resource Biometrics	
NREM 3101 Forest Resource Field Studies	
NREM 3613 Principles of Rangeland Management	
PBIO 1404 Plant Biology (LN)	
PBIO 4463 Plant Physiology	
PLNT 2013 Applied Plant Science	
PLNT 3554 Plant Genetics and Biotechnology	
PLNT 4113 Advanced Weed Science	
PLNT 4123 Plant-Environment Interactions	
PLNT 4353 Plant Breeding	
PLP 3343 Principles of Plant Pathology	
MICR 2123 Introduction to Microbiology and Introduction to Microbiology Laboratory	
& MICR 2132	
SOIL 4213 Precision Agriculture	
SOIL 4363 Environmental Soil Science	
SOIL 4893 Environmental Soil Chemistry	
BIOL 1604 Animal Biology	

BIOL 3104	Invertebrate Zoology
BIOL 4104	General Parasitology
BIOL 4133	Evolution
MATH 2103	Business Calculus (A)
MATH 2144	Calculus I (A)
MATH 2153	Calculus II (A)
CHEM 3153	Organic Chemistry II
& CHEM 3112	and Organic Chemistry Laboratory
PHYS 1114	College Physics I (LN)
PHYS 1214	College Physics II (LN)
STAT 2331	SAS Programming
STAT 4013	Statistical Methods I (A)
STAT 4023	Statistical Methods II
STAT 4043	Applied Regression Analysis
BIOL 4133	Evolution

Foreign Language: Up to 10 credit hours of upper division foreign language may be substituted

<b>Hours Subtotal</b>	<b>61</b>
<b>Electives</b>	
Select 0 hours or hours to complete required total for degree	0
<b>Total Hours</b>	<b>120</b>

- College & Departmental requirements that may be used to meet GE requirements.
- If ENGL 3323 Technical Writing is substituted for ENGL 1213 Composition II above; hours in this block are reduced by 3.
- If used as (S) course above, hours in this block reduced by 3.

## Other Requirements

- A minimum of 40 semester credit hours and 100 grade points must be earned in courses numbered 3000 or above.
- A 2.00 GPA or higher in upper-division hours.

## Additional State/OSU Requirements

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.
- Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.
- Degrees that follow this plan must be completed by the end of Summer 2026.