## ENTOMOLOGY: PRE-VETERINARY AND PRE-MEDICAL, BSAG

Requirements for Students Matriculating in or before Academic Year 2022-2023. Learn more about University Academic Regulation 3.1 ([http://catalog.okstate.edu/university-academic-regulations/](http://catalog.okstate.edu/university-academic-regulations/)).

**Minimum Overall Grade Point Average**: 2.00  
**Total Hours**: 120

### General Education Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English Composition</strong></td>
<td>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>)</td>
<td></td>
</tr>
<tr>
<td>ENGL 1113</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 1313</td>
<td>Critical Analysis and Writing I</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1213</td>
<td>Composition II</td>
<td></td>
</tr>
<tr>
<td>ENGL 1413</td>
<td>Critical Analysis and Writing II</td>
<td></td>
</tr>
<tr>
<td>ENGL 3323</td>
<td>Technical Writing</td>
<td></td>
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</tbody>
</table>

### American History & Government

Select one of the following:  
- HIST 1103 | Survey of American History                  | 3     |
- HIST 1483 | American History to 1865 (H)                |       |
- HIST 1493 | American History Since 1865 (DH)           |       |
- POLS 1113 | American Government                         | 3     |

### Analytical & Quantitative Thought (A)

- MATH 1513 | College Algebra (A)  
- or MATH 2103 | Business Calculus (A)  

### Humanities (H)

Courses designated (H) | 6

### Natural Sciences (N)

Must include one Laboratory Science (L) course

<table>
<thead>
<tr>
<th>Code</th>
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<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CHEM 1314</td>
<td>Chemistry I (LN)</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1515</td>
<td>Chemistry II (LN)</td>
<td>5</td>
</tr>
</tbody>
</table>

Select four hours from the following:  
- BIOL 1113 | Introductory Biology (N)                   | 4     |
- & BIOL 1111 | Introductory Biology Laboratory (LN)  
- BIOL 1114 | Introductory Biology (LN)                  |       |

### Social & Behavioral Sciences (S)

- SPCH 2713 | Introduction to Speech Communication (S)  
- or SPCH 3733 | Elements of Persuasion (S)  

### General Education

Any course designated (A), (H), (N), or (S) | 3

### Hours Subtotal

**40**

### Diversity (D) & International Dimension (I)

May be completed in any part of the degree plan  
Select at least one Diversity (D) course

### College/Departmental Requirements

#### Agricultural Sciences and Natural Resources

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     |
- PHYS 1114 | College Physics I (LN)  
- & PHYS 1214 | College Physics II (LN)  

### STAT 2013 or STAT 2023

- Elementary Statistics (A)  
- Elementary Statistics for Business and Economics (A)  

Select one of the following:  
- ANSI 1124 | Introduction to the Animal Sciences  
- BIOC 2344 | Chemistry and Applications of Biomolecules  

- ENVR 1113 | Elements of Environmental Science (N)  
- FDSC 1133 | Fundamentals of Food Science  
- HORT 1013 | Principles of Horticultural Science (LN)  
- LA 1013 | Introduction to Landscape Architecture  
- 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)  

### Written and Oral Communications

Select one of the following:  
- 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  

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### Major Requirements

#### Core ENTO Courses

- ENTO 3003 | Livestock Entomology  | 3     |
- ENTO 3044 | Insect Morphology and Physiology  | 4     |
- ENTO 4464 | Insect Biology and Classification  | 4     |
- ENTO 4854 | Medical and Veterinary Entomology  | 4     |
- ENTO 4800 | Entomology Practicum (3 Hours)  | 3     |

#### Additional Core Courses

- MICR 2123 | Introduction to Microbiology  
- & MICR 2132 | and Introduction to Microbiology Laboratory  
- BIOL 1604 | Animal Biology  
- or BIOL 3204 | Physiology  

Select one of the following:  
- CHEM 3013 | Survey of Organic Chemistry  
- and Survey of Organic Chemistry Laboratory  

or
CHEM 3053 Organic Chemistry I
& CHEM 3153 and Organic Chemistry II
& CHEM 3112 and Organic Chemistry Laboratory
BIOC 3653 Survey of Biochemistry 3
Select one of the following: 3
ANSI 3423 Animal Genetics (Vet)
BIOL 3023 General Genetics (Med)

Organic Chemistry I and Organic Chemistry II
Organic Chemistry Laboratory

Select Alternative 1 or Alternative 2 (p. 2) 18

Hours Subtotal 56

Electives
Select 0 hours or hours to complete required total for degree 0

Total Hours 120

College & Departmental requirements that may be used to meet General Education requirements.

1
2

If ENGL 3323 Technical Writing is substituted for ENGL 1213 Composition II above; hours in this block are reduced by 3.

Alternatives

Alternative 1
Complete the first 2 semesters in a College of Veterinary Medicine or Medical School

Alternative 2

<table>
<thead>
<tr>
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<th>Hours</th>
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<tbody>
<tr>
<td>ANSI 3543</td>
<td>Principles of Animal Nutrition</td>
<td></td>
</tr>
<tr>
<td>ANSI 4843</td>
<td>Applications of Biotechnology in Animal Science</td>
<td></td>
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<tr>
<td>BIOL 3023</td>
<td>General Genetics</td>
<td></td>
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<tr>
<td>ENTO 3021</td>
<td>Postharvest, Structural, and Urban Arthropod Pests</td>
<td></td>
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<tr>
<td>ENTO 3331</td>
<td>Insect Pests of Agronomic Crops</td>
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<tr>
<td>ENTO 3421</td>
<td>Horticultural Insects</td>
<td></td>
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<tr>
<td>ENTO 3461</td>
<td>Insects in Forest Ecosystems</td>
<td></td>
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<tr>
<td>ENTO 4733</td>
<td>Insect Behavior and Chemical Ecology</td>
<td></td>
</tr>
<tr>
<td>ENTO 4923</td>
<td>Applications of Biotechnology in Pest Management</td>
<td></td>
</tr>
<tr>
<td>ENTO 4800</td>
<td>Entomology Practicum (3 hours)</td>
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</tr>
<tr>
<td>MICR 3033</td>
<td>Cell and Molecular Biology</td>
<td></td>
</tr>
<tr>
<td>MICR 3253</td>
<td>Immunology</td>
<td></td>
</tr>
<tr>
<td>MATH 2144</td>
<td>Calculus I (A)</td>
<td></td>
</tr>
<tr>
<td>MATH 2153</td>
<td>Calculus II (A)</td>
<td></td>
</tr>
<tr>
<td>MATH 2163</td>
<td>Calculus III</td>
<td></td>
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<tr>
<td>PSYC 1113</td>
<td>Introductory Psychology (S)</td>
<td></td>
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<tr>
<td>SOC 1113</td>
<td>Introductory Sociology (S)</td>
<td></td>
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<tr>
<td>BIOL 3114</td>
<td>Vertebrate Zoology</td>
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<tr>
<td>BIOL 3204</td>
<td>Physiology</td>
<td></td>
</tr>
<tr>
<td>BIOL 3214</td>
<td>Human Anatomy</td>
<td></td>
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<tr>
<td>BIOL 4104</td>
<td>General Parasitology</td>
<td></td>
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<tr>
<td>BIOL 4113</td>
<td>Conservation Genetics</td>
<td></td>
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</table>

BIOL 4134 Embryology
BIOL 4215 Mammalian Physiology
BIOL 4273 Environmental Physiology
BIOL 4283 Endocrinology
BIOL 4293 Behavioral Neuroendocrinology

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 2028.