## Entomology: Bio-Forensics, BSAG

### Requirements for Students Matriculating in or before Academic Year 2019-2020

Learn more about University Academic Regulation 3.1 ([http://catalog.okstate.edu/university-academic-regulations/#matriculation](http://catalog.okstate.edu/university-academic-regulations/#matriculation)).

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<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>
</tbody>
</table>

Select one of the following:

- **ENGL 1213** Composition II
- **ENGL 1413** Critical Analysis and Writing II
- **ENGL 3323** Technical Writing

### American History & Government

Select one of the following:

- **HIST 1103** Survey of American History  
- **HIST 1483** American History to 1865 (H)  
- **HIST 1493** American History Since 1865 (DH)  
- **POLS 1113** American Government  

### Analytical & Quantitative Thought (A)

Select one of the following:

- **MATH 1513** College Algebra (A)  
- **MATH 1613** Trigonometry (A)  
- **MATH 2103** Business Calculus (A)

### Humanities (H)

Courses designated (H)  

### Natural Sciences (N)

Must include one Laboratory Science (L) course

- **BIOL 1114** Introductory Biology (LN)  
- **CHEM 1314** Chemistry I (LN)

### Social & Behavioral Sciences (S)

Course designated (S)  

### Additional General Education

Courses designated (A), (H), (N), or (S)

### 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

Select at least one International Dimension (I) course

### College/Departmental Requirements

#### Agricultural Sciences and Natural Resources

Course cannot be used here and as an (N)

- **AG 1011** First Year Seminar  
- **AGEC 1113** Introduction to Agricultural Economics (S)

- **ENTO 2993** Introduction to Entomology (LN)  
- **STAT 2013** Elementary Statistics (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  
- **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)

### Written and Oral Communications

Select one of the following:

- **AGCM 3013** Written Communications in Agricultural Sciences and Natural Resources  
- **BCOM 3113** Written Communication  
- **BCOM 3443** Business Communication for International Students  
- **ENGL 3323** Technical Writing

Select one of the following:

- **AGCM 3213** Oral Communications in Agricultural Sciences & Natural Resources (S)  
- **SPCH 2713** Introduction to Speech Communication (S)  
- **SPCH 3733** Elements of Persuasion (S)

### Hours Subtotal

19

### Major Requirements

#### Core Courses

Select two of the following:

- **ENTO 3044** Insect Morphology and Physiology  
- **ENTO 4464** Insect Biology and Classification  
- **ENTO 4854** Medical and Veterinary Entomology

#### Additional Core Courses

- **ENTO 4573** Introduction to Forensic Entomology  
- **SOC 4333** Criminology (S)  
- **SOC 4743** Criminalistics: Introduction to Forensic Sciences

#### Additional Entomology

- **ENTO 2143** Global Issues in Agricultural Biosecurity and Forensics

#### Related Courses

- **ENTO 4800** Entomology Practicum

#### Genetics:

Select one of the following:

- **BIOL 3023** General Genetics  
- **PLNT 3554** Plant Genetics and Biotechnology  
- **ANSI 3423** Animal Genetics

#### Chemistry:

- **CHEM 1515** Chemistry II (LN)
Organic Chemistry (5 upper division hours) 5
BIOC 3653 Survey of Biochemistry 3

Lab Courses:
CHEM 2113 Principles of Analytical Chemistry 3
CHEM 2122 Quantitative Analysis Laboratory 2
BIOC 3723 Biochemistry and Molecular Biology Laboratory 3

Additional Biological Courses
Select 7 hours of the following: 7

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>MICR 2123 &amp; 2132</td>
<td>Introduction to Microbiology and Introduction to Microbiology Laboratory</td>
</tr>
<tr>
<td>MICR 3033</td>
<td>Cell and Molecular Biology</td>
</tr>
<tr>
<td>MICR 4123</td>
<td>Virology</td>
</tr>
<tr>
<td>MICR 4203</td>
<td>Bioinformatics</td>
</tr>
<tr>
<td>MICR 4233</td>
<td>Advanced Cell and Molecular Biology</td>
</tr>
<tr>
<td>MICR 4253</td>
<td>Concepts in Medical Genetics</td>
</tr>
<tr>
<td>MICR 4263</td>
<td>Microbial Genetics: from Genes to Genomes</td>
</tr>
<tr>
<td>MICR 4323</td>
<td>Biological Energy Transduction</td>
</tr>
<tr>
<td>BIOL 3204</td>
<td>Physiology</td>
</tr>
<tr>
<td>BIOL 415</td>
<td>Mammalian Physiology</td>
</tr>
<tr>
<td>BIOL 4283</td>
<td>Endocrinology</td>
</tr>
<tr>
<td>BIOL 4293</td>
<td>Behavioral Neuroendocrinology</td>
</tr>
<tr>
<td>BIOL 4303</td>
<td>Organismal Ecotoxicology (OR)</td>
</tr>
</tbody>
</table>

Additional Math and Science
Select 7 hours of the following: 7

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>MATH 2144</td>
<td>Calculus I (A)</td>
</tr>
<tr>
<td>MATH 2153</td>
<td>Calculus II (A)</td>
</tr>
<tr>
<td>PBIO 1404</td>
<td>Plant Biology (LN)</td>
</tr>
<tr>
<td>CHEM 3153</td>
<td>Organic Chemistry II</td>
</tr>
<tr>
<td>PHYS 1114</td>
<td>College Physics I (LN)</td>
</tr>
<tr>
<td>PHYS 1214</td>
<td>College Physics II (LN)</td>
</tr>
<tr>
<td>STAT 2331</td>
<td>SAS Programming</td>
</tr>
<tr>
<td>STAT 4013</td>
<td>Statistical Methods I (A)</td>
</tr>
<tr>
<td>STAT 4023</td>
<td>Statistical Methods II</td>
</tr>
<tr>
<td>BIOL 1604</td>
<td>Animal Biology</td>
</tr>
<tr>
<td>BIOL 4133</td>
<td>Evolution (OR)</td>
</tr>
</tbody>
</table>

Upper level entomology, plant pathology, biological sciences, forensic sciences courses not taken for credit in other categories.

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 2025.

Foreign Language
Up to 10 credit hours of upper division foreign language may be substituted for Additional Natural Resources or Biological Sciences.