### ANIMAL SCIENCE: ANIMAL BIOTECHNOLOGY, BSAG

**Requirements for Students Matriculating in or before Academic Year 2018-2019.** Learn more about University Academic Regulation 3.1 [here](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>
<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
- HIST 1483  American History to 1865
- HIST 1493  American History Since 1865

- POLS 1113  American Government

**Analytical & Quantitative Thought (A)**

- MATH 1513  College Algebra (A)<sup>1</sup>

Select one of the following:

- MATH 1613  Trigonometry (A)<sup>1</sup>
- STAT 2013  Elementary Statistics (A)<sup>1</sup>
- STAT 2023  Elementary Statistics for Business and Economics (A)<sup>1</sup>

**Humanities (H)**

- Courses designated (H)
- Natural Sciences (N)

Must include one Laboratory Science (L) course

- BIOL 1114  Introductory Biology (LN)<sup>1</sup>

Any course designated (N)

- Social & Behavioral Sciences (S)

- AGEC 1113  Introduction to Agricultural Economics (S)<sup>1</sup>

**Additional General Education**

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

<table>
<thead>
<tr>
<th>Code</th>
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<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ANSI 1124</td>
<td>Introduction to the Animal Sciences</td>
<td>4</td>
</tr>
<tr>
<td>ANSI 2111</td>
<td>Animal and Food Science Professional Development</td>
<td>1</td>
</tr>
<tr>
<td>ANSI 2233</td>
<td>The Meat We Eat</td>
<td>1</td>
</tr>
<tr>
<td>or ANSI 2253</td>
<td>Meat Animal and Carcass Evaluation</td>
<td></td>
</tr>
<tr>
<td>PLNT 1213</td>
<td>Introduction to Plant and Soil Systems</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1314</td>
<td>Chemistry I (LN)&lt;sup&gt;2&lt;/sup&gt;</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 1215</td>
<td>Chemical Principles I (LN)</td>
<td></td>
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</tbody>
</table>

**Written and Oral Communications**

- AGCM 3103  Written Communications in Agricultural Sciences and Natural Resources<sup>3</sup>
- or ENGL 3323  Technical Writing

Select one of the following:<sup>4</sup>

- AGCM 3203  Oral Communications in Agricultural Sciences & Natural Resources (S)
- SPCH 2713  Introduction to Speech Communication (S)
- SPCH 3733  Elements of Persuasion (S)

**Hours Subtotal:** 22

**Major Requirements**

**Core Courses**

- ANSI 3423  Animal Genetics
- ANSI 3443  Animal Reproduction
- ANSI 3543  Principles of Animal Nutrition
- ANSI 4843  Applications of Biotechnology in Animal Science
- ANSI 4863  Capstone for Animal Agriculture

**Option**

Select one option (p. 2)

**Additional Core Courses**

- CHEM 1225  Chemical Principles II (LN)
- or CHEM 1515  Chemistry II (LN)
- MICR 2123  Introduction to Microbiology
- or MICR 2132  Introduction to Microbiology Laboratory
- PHYS 1014  Descriptive Physics (N)
- or PHYS 1114  College Physics I (LN)
- MICR 3033  Cell and Molecular Biology
- or BIOL 4215  Mammalian Physiology

Select one of the following:

- ANSI 3414  Form and Function of Livestock and Poultry
- BIOL 1604  Animal Biology
- BIOL 3204  Physiology
- Select 5 hours upper division organic chemistry
- BIOC 3653  Survey of Biochemistry

**Related Courses**

Select 5 hours of the following:

Minimum of 3 upper division hours required

- ANSI 3903  Agricultural Animals of the World (I) (or any course designated (I))
- ANSI 3333  Meat Science
- ANSI 4803  Animal Growth and Performance
- ANSI 4910  Animal Industry Internship
- MATH 2144  Calculus I (A)
MATH 2153  Calculus II (A)
MATH 2163  Calculus III
PHYS 1214  College Physics II (LN)
ANSI  
BIOC  
BIOL  
CHEM  
ENTO  
FDSC  
MICR  
STAT  
No more than 3 hours from ANSI 4900

Hours Subtotal  58

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

Total Hours  120

1  College & Departmental requirements that may be used to meet GE requirements.
2  If used for [N] requirement, hours in this block reduced by CHEM course hours and related courses increased
3  If ENGL 3323 Technical Writing is substituted for ENGL 1213 Composition II above; hours in this block are reduced by 3
4  If used as (S) course above, hours in this block reduced by 3
5  No more than 3 hours from ANSI 4900 Special Problems

Options
Option 1

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSI 3433</td>
<td>Animal Breeding</td>
<td>6</td>
</tr>
<tr>
<td>ANSI 3623</td>
<td>Livestock Behavior Handling</td>
<td></td>
</tr>
<tr>
<td>ANSI 3653</td>
<td>Applied Animal Nutrition</td>
<td></td>
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</tbody>
</table>

Select 3 hours of the following:

| ANSI 4023 | Poultry Science                      |       |
| ANSI 4423 | Horse Science                        |       |
| ANSI 4543 | Dairy Cattle Science                 |       |
| ANSI 4553 | Sheep Science                        |       |
| ANSI 4613 | Beef Cow-Calf Management             |       |
| ANSI 4633 | Stocker and Feedlot Cattle Management|       |
| ANSI 4643 | Swine Science                        |       |
| ANSI 4703 | Equine Enterprise Management         |       |
| ANSI 4713 | Beef Seedstock Management and Sales  |       |

Option 2

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSI 4803</td>
<td>Animal Growth and Performance</td>
<td>9</td>
</tr>
<tr>
<td>MICR 3253</td>
<td>Immunology</td>
<td></td>
</tr>
<tr>
<td>MICR 4123</td>
<td>Virology</td>
<td></td>
</tr>
<tr>
<td>MICR 4233</td>
<td>Advanced Cell and Molecular Biology</td>
<td></td>
</tr>
</tbody>
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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 2024.