Animal Science - BS, Science Option

This curriculum is designed to provide scientific expertise in chemistry, biological and physical sciences and mathematics and is recommended for students considering entry into the veterinary, medical or allied health field, or the graduate program of their choice. This option provides a strong background for graduate study in a wide variety of disciplines. Animal scientists graduating with a Bachelor of Science degree in this option who do not enter graduate or professional school find employment in rewarding careers in the pharmaceutical, clinical and food-related industries. Students may concentrate on an emphasis area within this option, including the following.

Pre-Professional

Students planning to pursue a career in veterinary medicine can complete all course requirements for admission to the professional curriculum in this emphasis. Students gain experience working with animals through direct contact in laboratory courses and directed field study. Students acquire knowledge of animal systems and animal behavior principles through coursework and interaction with livestock industry leaders. Students are also prepared to seek admission to the professional curricula in medicine, dentistry, pharmacy, optometry and physical therapy.

Pre-graduate Studies

This emphasis prepares students to pursue a Master of Science, Master of Agriculture or Doctor of Philosophy degree. Possible graduate programs include animal behavior, animal breeding, biochemistry, cellular and molecular biology, meats, dairy science, food science and technology, genetics, growth biology, nutrition and reproductive physiology. Experience gained through honors courses, internships, special problems courses and research laboratories helps the student identify specific disciplines of interest for graduate study. Students with advanced degrees are employed as university professors, research scientists or technicians, extension livestock specialists and technical representatives for industry.

Program Requirements

Animal Science Core Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>AGLS 101</td>
<td>Modern Agricultural Systems and Renewable Resources</td>
<td>3</td>
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<tr>
<td>ANSC 108</td>
<td>General Animal Science</td>
<td>3</td>
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<tr>
<td>ANSC 303/</td>
<td>Principles of Animal Nutrition</td>
<td>3</td>
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<tr>
<td>NUTR 303</td>
<td></td>
<td>3</td>
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<tr>
<td>ANSC 305</td>
<td>Animal Breeding</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 307/</td>
<td>Meats</td>
<td>3</td>
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<tr>
<td>FSTC 307</td>
<td></td>
<td>3</td>
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<tr>
<td>ANSC 318</td>
<td>Feeds and Feeding</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 433</td>
<td>Reproduction in Farm Animals</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 481</td>
<td>Seminar</td>
<td>1</td>
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<td></td>
<td>Animal science production requirement</td>
<td>4</td>
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</tbody>
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Select one of the following:

- ANSC 406 Beef Cattle Production and Management
- ANSC 412 Swine Production and Management
- ANSC 414 Sheep and Goat Production and Management
- ANSC 420 Equine Production and Management
- ANSC 447 Advanced Meat Science and Technology

DASC 418 Feeding and Management of Dairy Cattle 4
GENE 301 Comprehensive Genetics 4
& GENE 312 and Comprehensive Genetics Laboratory 3
STAT 301 Introduction to Biometry 3

Science Option Curriculum

BICH 410 Comprehensive Biochemistry I 3
BICH 411 Comprehensive Biochemistry II 3
BIOL 112 Introductory Biology II 4
CHEM 102 Fundamentals of Chemistry II 3
CHEM 112 Fundamentals of Chemistry Laboratory II 1
CHEM 227 Organic Chemistry I 3
CHEM 237 Organic Chemistry Laboratory 1
CHEM 228 Organic Chemistry II 3
CHEM 238 Organic Chemistry Laboratory 1
PHYS 201 College Physics 4
PHYS 202 College Physics 4

Microbiology elective 4

Select one of the following:

- BIOL 206 Introductory Microbiology 3
- BIOL 351 Fundamentals of Microbiology 3
- VTPB 405 Biomedical Microbiology 3

Physiology elective 3-4

- VTPP 323 Physiology of Domestic Animals 4
- or BIOL 319 or Integrated Human Anatomy and Physiology I 3

General electives 2 10

University Core Curriculum

- ANSC 107 General Animal Science 3
- BIOL 111 Introductory Biology I 4
- CHEM 101 Fundamentals of Chemistry I 4
- & CHEM 111 and Fundamentals of Chemistry Laboratory I 6
- ENGL 104 Composition and Rhetoric 3
- ENGL 210 Technical and Business Writing 3
- or COMM 203 or Public Speaking 3
- Government/Political science electives 3 6
- Social and Behavioral Science core course 4 3
- American History elective 4 6
- Language, Philosophy and Culture elective 4 3
- Mathematics elective 6
- Creative arts elective 4 3
- Foreign language requirement (see Foreign Language table) 4
- International and cultural diversity courses 5
- Writing-intensive courses 6

Total Semester Credit Hours 120

1 Students are required to make a C or better for each of their courses in the major coursework area.
Students may choose to use general electives to complete a concentration in a pre-professional program, a pre-graduate study area, and/or a certificate program.

Credit by examination may be substituted for POLS 206 or POLS 207.

Certain courses in this University Core Curriculum category will fulfill credits toward the six-hour International and Cultural Diversity requirement.

Remaining international and cultural diversity (ICD) credits must be fulfilled if University Core Curriculum courses selected do not fulfill the six-hour ICD requirement.

All undergraduate students must take at least (2) specific courses in their major designated as writing intensive (W). To be chosen in consultation with your academic advisor.

**Foreign Language**

**Option 1**
- Completed two years high school foreign language

**Option 2**

Select one of the following:

- **CLAS 101** and **CLAS 102**: Beginning Classical Greek I and Beginning Classical Greek II
- **CLAS 121** and **CLAS 122**: Beginning Latin I and Beginning Latin II
- **FREN 101** and **FREN 102**: Beginning French I and Beginning French II
- **GERM 101** and **GERM 102**: Beginning German I and Beginning German II
- **ITAL 101** and **ITAL 102**: Beginning Italian I and Beginning Italian II
- **JAPN 101** and **JAPN 102**: Beginning Japanese I and Beginning Japanese II
- **RUSS 101** and **RUSS 102**: Beginning Russian I and Beginning Russian II
- **SPAN 101** and **SPAN 102**: Beginning Spanish I and Beginning Spanish II