ANIMAL SCIENCE - BS, PRODUCTION/INDUSTRY OPTION

This curriculum prepares students for careers in animal-oriented agribusinesses. Other courses, in addition to animal science courses, include marketing, economics, genetics and management. A wide array of internships giving students invaluable experience in all phases of livestock production and related industries is available. Career opportunities include sales, management, public relations, marketing, quality control and education. Students may concentrate on an emphasis area within this option, including the following.

**Beef Cattle**

Students receive training that enables them to pursue careers in ranch management, feedlot management, pharmaceutical sales and other service-oriented livestock industries. Students are trained in all aspects of production, marketing and merchandising techniques for employment in the beef industry. The University Beef Cattle Center gives students hands-on experience.

**Dairy**

The focus of this emphasis area is to develop a well-rounded, knowledgeable student. Students have the opportunity to apply scientific principles, problem-solving methods, state-of-the-art techniques and information transfer to complex dairy production systems.

**Equine**

Designed for students with professional or vocational interests in horses and the horse industry. Coursework emphasizes equine nutrition, breeding, reproduction, health, management, training and judging. Lectures are reinforced with laboratories in which students work with horses. Graduates are well prepared for careers with horse production farms, stallion stations, performance and race training stables, breed associations, performance horse organizations, feed and pharmaceutical companies, county extension positions, and other industries and agencies related to the horse industry.

**Meat**

Students prepare for a career in the meats industry by taking meat science and processing and evaluation courses. Students also can conduct research through special problems courses and can gain valuable work experience on campus in the Meat Science Section or the Rosenthal Meat Science and Technology Center or off campus through internships or summer jobs. Job opportunities are available in packing, processing, retailing, purveying, food service, promotion, public relations and government regulatory agencies.

**Sheep**

Designed to prepare students for careers in the sheep and goat industries and in the associated wool and mohair industries, this emphasis gives students first-hand experience in sheep production and management practices, as well as procedures for processing and evaluating fleeces. Job opportunities are diverse and include flock management, marketing of lamb and fiber products, feed and pharmaceutical sales and county extension agent positions.

**Swine**

This emphasis area is designated for students planning to pursue a career in swine production or closely allied industries. Students are taught the principles of breeding and genetics, nutrition and feeding, animal health, environmental control and waste management as they relate to profitable swine production systems. These principles are reinforced by hands-on experience with the department’s swine herd. Career paths include management of swine production units and technical service or sales for feed, pharmaceutical and breeding stock companies.

### Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Semester Credit Hours</th>
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<tbody>
<tr>
<td><strong>Animal Science Core Curriculum</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
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<tr>
<td>AGLS 101</td>
<td>Modern Agricultural Systems and Renewable Natural Resources</td>
<td>1</td>
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<tr>
<td>ANSC 108</td>
<td>General Animal Science</td>
<td>1</td>
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<tr>
<td>ANSC 303/ NUTR 303</td>
<td>Principles of Animal Nutrition</td>
<td>3</td>
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<tr>
<td>ANSC 305</td>
<td>Animal Breeding</td>
<td>3</td>
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<tr>
<td>ANSC 307/ FSTC 307</td>
<td>Meats</td>
<td>3</td>
</tr>
<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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<tr>
<td>Animal science production requirement</td>
<td></td>
<td>4</td>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>ANSC 406</td>
<td>Beef Cattle Production and Management</td>
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<tr>
<td>ANSC 412</td>
<td>Swine Production and Management</td>
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<tr>
<td>ANSC 414</td>
<td>Sheep and Goat Production and Management</td>
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<tr>
<td>ANSC 420</td>
<td>Equine Production and Management</td>
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<tr>
<td>ANSC 447</td>
<td>Advanced Meat Science and Technology</td>
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<tr>
<td>DASC 418</td>
<td>Feeding and Management of Dairy Cattle</td>
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<tr>
<td>GENE 301/ GENE 312</td>
<td>Comprehensive Genetics and Comprehensive Genetics Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>STAT 301</td>
<td>Introduction to Biometry</td>
<td>3</td>
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<tr>
<td><strong>Production/Industry Option Curriculum</strong></td>
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<tr>
<td>ACCT 209</td>
<td>Survey of Accounting Principles</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 437</td>
<td>Marketing and Grading of Livestock and Meats</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 222</td>
<td>Elements of Organic and Biological Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>ENTO 201/ ENTO 205</td>
<td>General Entomology or Veterinary Entomology Laboratory</td>
<td>3</td>
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<tr>
<td>AGEC 330</td>
<td>Financial Management in Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>or FINC 409</td>
<td>or Survey of Finance Principles</td>
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Management elective  
Select one of the following:  
- AGEC 325 Principles of Farm and Ranch Management  
- AGEC 340 Agribusiness Management  
- MGMT 309 Survey of Management  
- BIOL 206 Introductory Microbiology or DASC 326 or Food Bacteriology FSTC 326

Physiology elective  
Select one of the following:  
- ANSC 242 Growth and Development of Livestock  
- VLCS 422 Equine Disease and Epidemiology  
- VTPP 323 Animal Physiology

Production elective  
Select one of the following:  
- ANSC 311 Equine Behavior and Training  
- ANSC 337 Meat Merchandising  
- ANSC 408 Management of Stocker and Feedlot Cattle  
- ANSC 411 Equine Nutrition and Health  
- ANSC 434 Animal Reproduction Management  
- ANSC 439 Feedlot Risk Management

Directed electives  
Any ANSC courses taken at Texas A&M

General electives  
- ANSC 107 General Animal Science 3  
- BIOL 111 Introductory Biology I 4  
  or BIOL 107 or Zoology  
- CHEM 101 Fundamentals of Chemistry I 4  
  & CHEM 111 and Fundamentals of Chemistry Laboratory I  
- Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) 6  
- Government/Political science (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science) 6  
- POLS 206 American National Government  
- POLS 207 State and Local Government  
- Social and behavioral sciences 3  
  Select one of the following:  
  - AGEC 105 Introduction to Agricultural Economics  
  - ECON 202 Principles of Economics  
  - ECON 203 Principles of Economics  
  - American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) 6

Language, philosophy and culture (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture) 3  
Mathematics (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics) 6  
Creative arts (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts) 3  
Foreign language requirement (see Foreign Language table)  
International and cultural diversity (http://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements) 3  
Writing-intensive 4

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.  
2 Credit by examination may be substituted for POLS 206 or POLS 207.  
3 The Graduation requirements include a requirement for 6 hours of international and cultural diversity courses. A course satisfying a Core category, a college/department requirement, or a free elective can be used to satisfy this requirement. See academic advisor.  
4 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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>Option 1</td>
<td>Completed two years high school foreign language</td>
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</table>
| Option 2 | Select one of the following:  
  - CLAS 101 & CLAS 102 Beginning Classical Greek I & II 8  
  - CLAS 121 & CLAS 122 Beginning Latin I & II 8  
  - FREN 101 & FREN 102 Beginning French I & II 8  
  - GER 101 & GER 102 Beginning German I & II 8  
  - ITAL 101 & ITAL 102 Beginning Italian I & II 8  
  - JAP 101 & JAP 102 Beginning Japanese I & II 8  
  - RUS 101 & RUS 102 Beginning Russian I & II 8  
  - SPA 101 & SPA 102 Beginning Spanish I & II 8 |