**Animal Sciences**

Animals have many important roles in human societies including the provision of food and fiber, draft power, recreational and athletic activities, and companionship. In addition, animals and their interactions with humans have environmental consequences. The processing, preservation, and quality of animal-derived foods are of significant economic and safety importance. Animal Sciences involves studying and applying the basic principles of nutrition, reproduction, and genetics to the production and management of animals including horses, dairy and beef cattle, sheep, swine, poultry, and other domesticated species. Additional course work provides information on the production and handling of animal-derived foods.

No one program fits all Animal Sciences students. Students come from varied backgrounds and their interests range from livestock and poultry production and management to marketing and public relations; from public education and extension to graduate training in research and teaching and veterinary medicine. No matter what species you have an interest in, the Animal Sciences major will allow you to combine your interest with your desire for an exciting and rewarding career.

As an Animal Sciences major, students have the opportunity to pursue specific interests by selecting one of three study options: Animal Industry, Food Industry or Pre-Professional. The Animal Industry option is for those students interested in animal production and management and can specialize in one of three areas: livestock, equine, or dairy. The Food Industry option is designed to provide an emphasis on aspects of food processing, chemistry, and safety. The Pre-Professional option is a rigorous study program for students with interests in veterinary sciences, human medicine, and graduate research. Students must consult the pre-professional advisor or graduate school advisor of the university to which they intend on applying for additional or specific requirements.

**Career Opportunities**

To keep pace with the food, fiber, and recreation requirements of a growing world population, Animal Sciences graduates are needed in the livestock industry and closely related fields. The Animal Sciences major offers considerable flexibility in fulfilling specific career objectives, whether you are interested in working directly with livestock or indirectly in closely related areas such as agribusiness, research, government, or education.

**Graduation Requirements**

To earn the Bachelor of Science in Animal Sciences, the student must have a minimum of 120 credit hours with at least a 2.0 grade-point standing. A minimum of 45 credit hours must be from upper division courses (300 and above). Remedial courses may not be counted toward the total hours required for the degree. In addition to University Studies requirements, students must complete college, departmental and specialty support requirements.

**Plan of Study**

As an animal sciences major you are required to develop an acceptable Plan of Study during your sophomore year for your junior and senior years. The plan must be signed by your advisor and returned to the Office of Academic Programs.

If you are an upper division transfer student (from another university or from another UK college or department) then you will submit your plan during the first semester you are enrolled in the program. Consult your academic advisor in developing your Plan of Study.

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASC 101</td>
<td>Domestic Animal Biology</td>
<td>3</td>
</tr>
<tr>
<td>ASC 102</td>
<td>Applications of Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>ASC 205</td>
<td>Livestock, People and Their Interactions</td>
<td>1</td>
</tr>
<tr>
<td>ASC 325</td>
<td>Animal Physiology</td>
<td>3</td>
</tr>
<tr>
<td>ASC 362</td>
<td>Animal Genetics</td>
<td>4</td>
</tr>
<tr>
<td>ASC 364</td>
<td>Reproductive Physiology of Farm Animals</td>
<td>4</td>
</tr>
<tr>
<td>ASC 378</td>
<td>Animal Nutrition and Feeding</td>
<td>4</td>
</tr>
<tr>
<td>ASC 470</td>
<td>Capstone for Animal Agriculture</td>
<td>3</td>
</tr>
</tbody>
</table>

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Each student must complete the following:

**College Required Hours**

- GEN 100 Issues in Agriculture ................................................. 3

**Subtotal: College Required Hours** ........................................... 3

**University Studies Requirements**

See “University Studies Program” on pages 77-81 of the 2007-2008 UK Bulletin for the complete University Studies requirements.

The courses listed below are (a) recommended by the college, or (b) required courses that also fulfill University Studies areas. Students should work closely with their advisor to complete the University Studies Program requirements.

Courses marked with an asterisk (*) may also be used to satisfy University Studies requirements.

**Inference-Logic**

- MA 123 Elementary Calculus and Its Applications ......................... 3
- or
- MA 113 Calculus I ............................................................... 4

**Natural Sciences**

- CHE 105 General College Chemistry I ......................................... 3
- CHE 107 General College Chemistry II ......................................... 3
- CHE 150 Principles of Biology I ................................................. 3
- BIO 152 Principles of Biology II ............................................... 3

**USP Electives**

- BIO 150 Principles of Biology I ................................................. 3
- **ENG 203 Business Writing ..................................................... 3

**Premajor Requirements**

- *MA 123 Elementary Calculus and Its Applications ......................... 3
- or
- *MA 113 Calculus I ............................................................... 4
- *BIO 150 Principles of Biology I ................................................. 3
- *BIO 152 Principles of Biology II ............................................... 3
- *CHE 105 General College Chemistry I ....................................... 3
- *CHE 107 General College Chemistry II ....................................... 3
- *CHE 111 Laboratory to Accompany General Chemistry I ............... 1
- *CHE 113 Laboratory to Accompany General Chemistry II ............. 2

**Subtotal: Premajor Hours** ....................................................... 21-22

**Satisfies the Graduation Writing Requirement.**
plus at least three of the following courses:
ASC 300 Meat Science ................................................................. 4
ASC 406 Beef Cattle Science ...................................................... 4
ASC 408G Swine Production ....................................................... 2
ASC 410G Equine Science ........................................................... 3
ASC 420G Dairy Cattle Science ................................................... 3

Subtotal: Major Hours ................................................................. 32-36

In addition to the Major Requirements, students choose one of three options:

**Option A: Animal Industry**

Students fulfilling the Major Requirements are eligible for the Animal Industry Option by taking certain required Specialty Support Courses (see below). In addition, students with more specific interests may, but are not required to, choose from three specializations available within this Option.

**No Specialization**  
(required Specialty Support only; see below) ........................................ 0

**Livestock Specialization**  
ASC 300 Meat Science ................................................................. 4  
and at least two from:  
ASC 340 Poultry Production ....................................................... 2  
ASC 404G Sheep Science ............................................................ 4  
ASC 406 Beef Cattle Science ...................................................... 4  
ASC 408G Swine Production ....................................................... 2

**Equine Specialization**  
ASC 310 Equine Anatomy and Conformation .................................. 2  
ASC 320 Equine Management ....................................................... 3  
ASC 410G Equine Science ........................................................... 3

**Dairy Specialization**  
ASC 420G Dairy Cattle Science ................................................... 3  
ASC 564 Milk Secretion ............................................................... 3

Subtotal: Option A Hours ............................................................... 0-5

**Option B: Food Industry**

Students fulfilling the Major Requirements are eligible for the Food Industry Option by taking certain required Specialty Support Courses (see below) and:

ASC 300 Meat Science ................................................................. 4  
FSC 107 Introduction to Food Science ........................................... 3

Subtotal: Option B Hours ............................................................... 7

**Option C: Pre-Professional**

Students fulfilling the Major Requirements are eligible for the Pre-Professional Option by taking certain Specialty Support Courses (see below). Students must consult the pre-professional advisor or graduate school advisor of the university to which they intend on applying for additional or specific requirements.

**Specialty Support**

**Animal Industry Option**
CHE 230 Organic Chemistry I ..................................................... 5  
or
CHE 236 Survey of Organic Chemistry ........................................ 3  
FSC 304 Animal Derived Foods .................................................. 5  
BIO 304 Principles of Genetics ................................................... 3-4  
CHE 230/231 Organic Chemistry and Laboratory I ....................... 5  
CHE 232/233 Organic Chemistry and Laboratory II ..................... 5  
PHY 211 General Physics ........................................................... 5  
PHY 213 General Physics ........................................................... 5

*Students must consult the pre-professional advisor or graduate school advisor of the university to which they intend on applying for additional or specific requirements.

Subtotal: Specialty Support .......................................................... 18-24

**Electives**

Electives should be selected to complete the 120 hours required for graduation.

Subtotal: Electives ................................................................. minimum of 17

TOTAL HOURS: ............................................................... 120