

# Animal Sciences

## College of Agriculture, Food and Environment

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. Processing, preservation, and quality of animal-derived foods significantly affect human health and economics. 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 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 allows specialization 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 UK Core requirements, students must complete college, departmental and specialty support requirements.

### UK Core Requirements

See the *UK Core* section of the *2016-2017 Undergraduate Bulletin* for the complete UK Core requirements. The courses listed below are (a) recommended by the college, or (b) required courses that also fulfill UK Core areas. Students should work closely with their advisor to complete the UK Core requirements.

#### I. Intellectual Inquiry in Arts and Creativity

Choose one course from approved list ..... 3

#### II. Intellectual Inquiry in the Humanities

Choose one course from approved list ..... 3

#### III. Intellectual Inquiry in the Social Sciences

Choose one course from approved list ..... 3

#### IV. Intellectual Inquiry in the Natural, Physical, and Mathematical Sciences

CHE 105 General College Chemistry I ..... 4  
CHE 111 Laboratory to Accompany General Chemistry I ..... 1

#### V. Composition and Communication I

CIS/WRD 110 Composition and Communication I ..... 3

#### VI. Composition and Communication II

CIS/WRD 111 Composition and Communication II ..... 3

#### VII. Quantitative Foundations

MA 123 Elementary Calculus and Its Applications  
or  
MA 113 Calculus I  
or  
MA 137 Calculus I With Life Science Applications ..... 4

#### VIII. Statistical Inferential Reasoning

Recommended:  
STA 210 Making Sense of Uncertainty:  
An Introduction to Statistical Reasoning ..... 3

#### IX. Community, Culture and Citizenship in the USA

GEN 100 Issues in Agriculture, Food and Environment ..... 3

#### X. Global Dynamics

Choose one course from approved list ..... 3

**UK Core hours** ..... **33**

#### Graduation Composition and Communication Requirement (GCCR)

WRD 203 Business Writing  
or  
WRD 204 Technical Writing ..... 3

#### Graduation Composition and Communication Requirement hours (GCCR)

..... **3**

#### Premajor Requirements

MA 123 Elementary Calculus and Its Applications  
or  
MA 113 Calculus I  
or  
MA 137 Calculus I With Life Science Applications ..... 4  
BIO 148 Introductory Biology I ..... 3  
BIO 152 Principles of Biology II ..... 3  
CHE 105 General College Chemistry I ..... 4  
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** ..... **20**

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University of Kentucky is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate, baccalaureate, masters, and doctorate degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call 404-679-4500, or online at [www.sacscoc.org](http://www.sacscoc.org) for questions about the accreditation of University of Kentucky.

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## Major Requirements

ASC 101 Domestic Animal Biology .....	3
ASC 102 Introduction to Livestock and Poultry Production .....	3
ASC 205 Career Development for Animal Sciences .....	1
ASC 325 Animal Physiology .....	3
ASC 362 Animal Breeding and Genetics .....	4
ASC 364 Reproductive Physiology of Farm Animals .....	4
ASC 378 Animal Nutrition and Feeding .....	4
ASC 470 Capstone for Animal Agriculture .....	3
ASC 499 Academic Enrichment Experience in Animal Sciences .....	1

plus at least three of the following courses:

ASC 340 Poultry Production .....	2
ASC 404G Sheep Science .....	4
ASC 406 Beef Cattle Science .....	4
ASC 408G Swine Production .....	3
ASC 410G Equine Science .....	3
ASC 420G Dairy Cattle Management .....	3

**Subtotal: Major hours** ..... **34-38**

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 .....

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 .....	3

#### Equine Specialization

ASC 310 Equine Anatomy .....	2
ASC 320 Equine Management .....	3
ASC 410G Equine Science .....	3

#### Dairy Specialization

ASC 420G Dairy Cattle Management .....	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

or

CHE 236 Survey of Organic Chemistry .....	3
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Depending on the student's area of interest and subject to the advisor's approval, additional courses at the 200-level or above may be selected from biochemistry, biology, chemistry, physics, statistics, or any agriculture-related area other than Animal Sciences ..... 15

##### Food Industry Option

CHE 230 Organic Chemistry I

or

CHE 236 Survey of Organic Chemistry .....	3
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FSC 304 Animal Food Products .....	4
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Depending on the student's area of interest and subject to the advisor's approval, additional courses at the 200-level or above may be selected from biochemistry, biology, chemistry, physics, statistics, or any agriculture-related area other than Animal Sciences ..... 12

##### Pre-Professional Option\*

BIO 304 Principles of Genetics

or

ABT/ENT 360 Genetics .....	3-4
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CHE 230/231 Organic Chemistry and Laboratory I .....	4
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CHE 232/233 Organic Chemistry and Laboratory II .....	4
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PHY 211 General Physics .....	5
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PHY 213 General Physics .....	5
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\*Students must consult the pre-professional advisor or graduate school advisor of the university to which they will apply for additional or specific requirements.

**Subtotal: Specialty Support** ..... **18-22**

#### Electives

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

**Subtotal: Electives** ..... **minimum of 18**

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