ANIMAL SCIENCES: COMPANION & EQUINE SCIENCE, BS

for the degree of Bachelor of Science Major in Animal Sciences, Companion & Equine Science Concentration

The companion animal and equine science concentration is designed for students intending to pursue a career in those industries generally not associated with traditional meat animal or dairy production. Students will take courses that prepare them for careers in specialized fields of animal care, animal health and animal well-being associated with zoos, kennels, research laboratories, and the racing industry.

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Prescribed Courses including Campus General Education

Graduation Requirements
Minimum hours required for graduation: 126 hours.

University Requirements
Minimum of 40 hours of upper-division coursework, generally at the 300 and 400 level. These hours can be drawn from all elements of the degree. Students should consult their academic advisor for additional guidance in fulfilling this requirement.

The university and residency requirements can be found in the Student Code (https://studentcode.illinois.edu/article3/part8/3-801/) (§ 3-801) and in the Academic Catalog (http://catalog.illinois.edu/general-information/degree-general-education-requirements/).

General Education Requirements
Follows the campus General Education (Gen Ed) requirements (https://courses.illinois.edu/gened/DEFAULT/DEFAULT/). Some Gen Ed requirements may be met by courses required and/or electives in the program.

Code	Title	Hours
Composition I		4-6
Advanced Composition		3
Humanities & the Arts (6 hours)		6
Natural Sciences & Technology (6 hours)		6
	fulfilled by CHEM 102, CHEM 104, and MCB 100	
Social & Behavioral Sciences (6 hours)		6
	fulfilled by ECON 102 or ACE 100 and one more course approved as Social & Behavioral Sciences	
Cultural Studies: Non-Western Cultures (1 course)		3
Cultural Studies: US Minority Cultures (1 course)		3
Cultural Studies: Western/Comparative Cultures (1 course)		3
Quantitative Reasoning (2 courses, at least one course must be Quantitative Reasoning I)		6-8
	fulfilled by MATH 220, MATH 221, or MATH 234; and ACE 262, CPSC 241, ECON 202, PSYC 235, STAT 100, or SOC 280	
Language Requirement (Completion of the third semester or equivalent of a language other than English is required)		0-15

Code	Title	Hours
Department Foundation		
ANSC 198	Building Habits for Success in Animal Sciences	2
Communication Option:		3 or 6
CMN 101	Public Speaking	
ALEC 115	Let's Talk about Food, Agriculture, and the Environment	
CMN 111 & CMN 112	Oral & Written Comm I and Oral & Written Comm II	
Calculus Option - Select one of the following:		4
MATH 220	Calculus	
MATH 221	Calculus I	
MATH 234	Calculus for Business I	
Statistics Option - Select one of the following:		3
ACE 262	Applied Statistical Methods and Data Analytics I	
CPSC 241	Intro to Applied Statistics	
ECON 202	Economic Statistics I	
PSYC 235	Intro to Statistics	
STAT 100	Statistics	
SOC 280	Intro to Social Statistics	
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	5
ECON 102	Microeconomic Principles	3 or 4
or ACE 100	Introduction to Applied Microeconomics	
Major Core		
ANSC 100	Intro to Animal Sciences	4
ANSC 101	Contemporary Animal Issues	3
ANSC 103	Working With Farm Animals	2
ANSC 221	Cells, Metabolism and Genetics	3
ANSC 222	Anatomy and Physiology	3
ANSC 223	Animal Nutrition	3
ANSC 224	Animal Reproduction and Growth	4
ANSC 298	Animal Science Careers and Professional Development	1
ANSC 398	UG Experiential Learning (must be taken for a letter grade)	1
ANSC 498	Integrating Animal Sciences	2

Code	Title	Hours
Companion Animal and Equine Science Core		
Choose one group: ANSC 206, ANSC 250, ANSC 306, & ANSC 307 may NOT be used to meet more than one degree requirement.		6
ANSC 250 & ANSC 307	Companion Animals in Society and Companion Animal Management	

or		
ANSC 206 & ANSC 306	Horse Management and Equine Science	
Select two of the following Applied Sciences courses:		6
ANSC 201	Principles of Dairy Production	
ANSC 205	World Animal Resources	
ANSC 206	Horse Management	
ANSC 211	Meat Animal Evaluation	
ANSC 215	Introduction to Animal Evaluation	
ANSC 250	Companion Animals in Society	
ANSC 301	Food Animal Production, Management, and Evaluation	
ANSC 305	Human Animal Interactions	
ANSC 306	Equine Science	
ANSC 307	Companion Animal Management	
ANSC 309	Meat Production and Marketing	
ANSC 310	Meat Selection and Grading	
ANSC 312	Advanced Livestock Evaluation	
ANSC 313	Horse Appraisal	
ANSC 314	Adv Dairy Cattle Evaluation	
ANSC 322	Livestock Feeds and Feeding	
ANSC 370	Companion Animal Policy	
ANSC 400	Dairy Herd Management	
ANSC 401	Beef Production	
ANSC 402	Sheep and Goat Production	
ANSC 403	Pork Production	
ANSC 404	Poultry Science	
ANSC 407	Animal Shelter Management	
ANSC 424	Pet Food & Feed Manufacturing	
ANSC 435	Milk Quality and Udder Health	
ANSC 470	Companion Animal Cruelty Investigations	
ANSC 471	ANSC Leaders & Entrepreneurs	
ANSC 500	Feeds in Dairy Nutrition and Diet Formulation	
ANSC 501	Nutritional Impact on Cow Health and Disorders	
ANSC 502	What is Milk and Milk Quality	
ANSC 580	Artificial Intelligence and Computer Vision for Precision Management	
Select two of the following Basic Sciences courses:		6
ANSC 251	Epidemics and Infectious Diseases	
ANSC 350	Principles of Biochemistry in Animals	
ANSC 363	Behavior of Domestic Animals	
ANSC 366	Animal Behavior	
ANSC 406	Zoo Animal Conservation Sci	
ANSC 409	Meat Science	
ANSC 420	Ruminant Nutrition	
ANSC 421	Minerals and Vitamins	
ANSC 422	Companion Animal Nutrition	
ANSC 431	Advanced Reproductive Biology	
ANSC 438	Lactation Biology	
ANSC 440	Applied Statistical Methods I	
ANSC 441	Human Genetics	
ANSC 444	Applied Animal Genetics	
ANSC 445	Statistical Methods	
ANSC 446	Population Genetics	
ANSC 449		
ANSC 450	Comparative Immunobiology	
ANSC 451	Microbes and the Anim Indust	
ANSC 452	Animal Growth and Development	
ANSC 454	Neuroimmunology	
ANSC 464	Physiology of Animal Stress & Disease	
ANSC 467	Applied Animal Ecology	
ANSC 480	Introduction to Coding and Precision Management	
ANSC 520	Protein and Energy Nutrition	
ANSC 521	Regulation of Metabolism	
ANSC 522	Advanced Ruminant Nutrition	
ANSC 523	Techniques in Animal Nutrition	
ANSC 524	Nonruminant Nutrition Concepts	
ANSC 525	Topics in Nutrition Research	
ANSC 526	Adv Companion Animal Nutrition	
ANSC 533	Repro Physiology Lab Methods	
ANSC 541	Regression Analysis	
ANSC 542	Applied Bioinformatics	
ANSC 543	Bioinformatics	

Code	Title	Hours
Total Hours		**126**

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Sample Sequence

This sample sequence is intended to be used only as a guide for degree completion. All students should work individually with their academic advisors to decide the actual course selection and sequence that works best for them based on their academic preparation and goals. Enrichment programming such as study abroad, minors, internships, and so on may impact the structure of this four-year plan. Course availability is not guaranteed during the semester indicated in the sample sequence.

Students must fulfill their Language Other Than English requirement by successfully completing a third level of a language other than English. For more information, see the corresponding section on the Degree and General Education Requirements page *(*http://catalog.illinois.edu/general-information/degree-general-education-requirements/*).*

First Year			
First Semester	**Hours**	**Second Semester**	**Hours**
ANSC 100	4	Composition I or Communication Option	4
ANSC 198	2	ANSC 101	3
CHEM 102	3	CHEM 104	3
CHEM 103	1	CHEM 105	1

Communication Option or Composition I	3	Calculus Option	4
General Education course	3		
	16		**15**

Second Year

First Semester	Hours	Second Semester	Hours
ANSC 222	3	ANSC 223	3
ANSC 221	3	ANSC 224	4
General Education course	3	ANSC 298	1
Statistics Option	3	Language Other than English (3rd level)	4
General Education course	3	General Education course	3
ANSC 103	2		
	17		**15**

Third Year

First Semester	Hours	Second Semester	Hours
ANSC 250 or 206	3	ANSC 398	1
Applied Science course	3	ANSC 307 or 306	3
MCB 100	3	Applied Science course	3
MCB 101	2	ECON 102 or ACE 100	3
General Education course	3	General Education course	3
General Education course	3	Free Elective course	3
	17		**16**

Fourth Year

First Semester	Hours	Second Semester	Hours
ANSC 498	2	Basic Sciences course	3
Basic Sciences course	3	Free Elective course	3
Free Elective course	4	Free Elective course	3
Free Elective course	3	Free Elective course	3
Free Elective course	3	Free Elective course	3
	15		**15**

Total Hours 126

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Upon successful completion of a degree in Animal Sciences, students will:

1. Demonstrate a mastery of the principles of animal sciences including genetics, nutrition, reproduction, and physiology
2. Understand and apply knowledge of animal husbandry, behavior, and handling techniques to effectively interact with animals in a safe and humane manner
3. Describe the breadth of animal sciences in terms of the variety of career paths, the diversity of the animal industries, the many roles of animals in society, and the contemporary issues facing animals and their environments
4. Communicate effectively, both written and orally, and interpret scientific sources and data
5. Through real-world and classroom experiences, develop competencies transferable to animal science careers

The Companion Animal and Equine Science concentration is one of the only programs of its kind. Students in this concentration are able to focus their animal sciences degree on the animals we share our lives with. Discover a career in industries outside of traditional meat animal or dairy production. Prepare for careers in specialized fields of animal care, health and well-being associated with zoos, kennels, research laboratories, and the racing industry.

This program:

1. Prepares students for a career in humane education, animal advocacy and policy, shelter management, and animal care and control.
2. Provides courses and experiences to develop skills related to companion animal behavior.
3. Offers approximately 25 students participate in internships through the Champaign County 3. Humane Society and ASPCA Poison Control Center every semester.

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Animal Sciences

Animal Sciences website (https://ansc.illinois.edu/)
Animal Sciences Laboratory
1207 West Gregory Drive
Urbana, IL 61801
217-333-3131
ansc@illinois.edu

College of Agricultural, Consumer & Environmental Sciences

College of Agricultural, Consumer & Environmental Sciences website (https://aces.illinois.edu/)

ACES Office of Academic Programs

128 Mumford Hall
1301 West Gregory Drive
Urbana, IL 61801
217-333-3380
aces-academics@illinois.edu

Advising

Advising Website (https://ansc.illinois.edu/about/contact-us/#paragraph--499)
217-333-3570
anscadvising@illinois.edu

Admissions

ACES Undergraduate Admissions (https://aces.illinois.edu/admissions/)
University of Illinois Urbana-Champaign Undergrad Admissions (https://www.admissions.illinois.edu/)
217-333-3380
visitACES@illinois.edu