

# 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

Code	Title	Hours
<b>Composition I and Speech</b>		
RHET 105	Writing and Research (or equivalent) (see college Composition I requirement)	4
CMN 101	Public Speaking	3
<b>Advanced Composition</b>		
	Select from campus approved list.	3-4
<b>Cultural Studies</b>		
	Select one course from Western culture, one from non-Western culture, and one from U.S. minority culture from campus approved lists.	9
<b>Foreign Language</b>		
	Coursework at or above the third level is required for graduation.	
<b>Quantitative Reasoning I</b>		
	Select one of the following:	4-5
MATH 220	Calculus	
MATH 221	Calculus I	
MATH 234	Calculus for Business I	
<b>Quantitative Reasoning II</b>		
	Select one of the following:	3-4
ACE 261		
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	
<b>Natural Sciences and Technology</b>		
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
<b>Humanities and the Arts</b>		

Courses selected from campus approved list		6
<b>Social Sciences</b>		
ECON 102 or ACE 100	Microeconomic Principles Introduction to Applied Microeconomics	3
	Additional social or behavioral science course; cannot be an economics course.	3-4
<b>ACES Required</b>		
ACES 101	Contemporary Issues in ACES	2
<b>Animal Sciences Required</b>		
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 <sup>1</sup>	1
ANSC 498	Integrating Animal Sciences	2

<sup>1</sup> ANSC 398 only fulfills the degree requirement when taken for a standard letter grade.

Code	Title	Hours
<b>Companion Animal and Equine Science Concentration Required</b>		
Choose one group: <sup>1</sup>		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: <sup>1</sup>		6
ANSC 201	Principles of Dairy Production	
ANSC 204	Intro Dairy Cattle Evaluation	
ANSC 205	World Animal Resources	
ANSC 206	Horse Management <sup>1</sup>	
ANSC 211	Breeding Animal Evaluation	
ANSC 215	Introduction to Animal Evaluation	
ANSC 219		
ANSC 250	Companion Animals in Society <sup>1</sup>	
ANSC 301	Food Animal Production, Management, and Evaluation	
ANSC 305	Human Animal Interactions	
ANSC 306	Equine Science	
ANSC 307	Companion Animal Management <sup>1</sup>	
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 360		

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 405	
ANSC 407	Animal Shelter Management
ANSC 424	Pet Food & Feed Manufacturing
ANSC 435	Milk Quality and Udder Health
ANSC 437	
ANSC 471	ANSC Leaders & Entrepreneurs
Select two of the following Basic Sciences courses: 6	
ANSC 251	Epidemics and Infectious Diseases
ANSC 331	
ANSC 350	Cellular Metabolism 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 447	
ANSC 448	
ANSC 449	Biological Modeling
ANSC 450	Comparative Immunobiology
ANSC 451	Microbes and the Anim Indust
ANSC 452	Animal Growth and Development
ANSC 453	
ANSC 454	Neuroimmunology
ANSC 460	The Secret Life of Animals: How Technology Can Help You Observe It and Take Action
ANSC 467	Applied Animal Ecology
ANSC 509	Muscle Biology
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
ANSC 545	Statistical Genomics
ANSC 554	
ANSC 561	
Additional elective courses must be completed to yield at least 25-29 126 total Hours for graduation.	
<b>Total Hours</b>	<b>126</b>

<sup>1</sup> ANSC 206, 250, 306 and 307 may NOT be used to meet more than one requirement.

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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 RHET 105 or CMN 101	4
ACES 101		2 ANSC 101	3
CHEM 102		3 CHEM 104	3
CHEM 103		1 CHEM 105	1
CMN 101 or RHET 105		3 MATH 234	4
General Education course		3	
		<b>16</b>	<b>15</b>

### Second Year

First Semester	Hours	Second Semester	Hours
ANSC 222		3 ANSC 223	3
ANSC 221		3 ANSC 224	4
ANSC 103		2 ANSC 298	1
STAT 100, CPSC 241, ECON 202, PSYC 235, or SOC 280		3 Language Other than English (3rd level)	4
General Education course		3 General Education course	3
General Education course		3	
		<b>17</b>	<b>15</b>

University of Illinois Undergrad Admissions (<https://www.admissions.illinois.edu/>)

<b>Third Year</b>			
<b>First Semester</b>	<b>Hours</b>	<b>Second Semester</b>	<b>Hours</b>
Concentration Elective		3 ANSC 398	3
Concentration Elective		3 Concentration Elective	3
MCB 100		3 Concentration Elective	3
MCB 101		2 ACE 100 or ECON 102	4
General Education course		3 General Education course	4
Free Elective course		3	
		<b>17</b>	<b>17</b>
<b>Fourth Year</b>			
<b>First Semester</b>	<b>Hours</b>	<b>Second Semester</b>	<b>Hours</b>
ANSC 498		2 Concentration Elective	3
Concentration Elective		3 Free Elective course	3
General Education course		3 Free Elective course	3
Free Elective course		3 Free Elective course	3
Free Elective course		3 Free Elective course	3
		<b>14</b>	<b>15</b>

**Total Hours 126**

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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  
 Animal Sciences email ([ansc@illinois.edu](mailto: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

**Advising**

(217) 333-3570  
 Animal Sciences Advising email ([anscadvising@illinois.edu](mailto:anscadvising@illinois.edu))  
 Advising website (<https://ansc.illinois.edu/about/contact-us/#paragraph-499>)

**Admissions**

ACES Undergraduate Admissions (<https://aces.illinois.edu/admissions/>)  
 Visit ACES email ([visitACES@illinois.edu](mailto:visitACES@illinois.edu))  
 (217) 333-3380