# Companion Animal & Equine Science Curriculum, Animal Sciences

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.

To learn about focus areas and recommended courses, please [visit our website](https://ansc.illinois.edu/academics/undergraduate-degrees/animal-sciences-major/companion-animal-and-equine-science).

Course offerings Course offerings vary from semester to semester. For current semester offerings, please [visit the course explorer](https://courses.illinois.edu/).

## Degree Information

Bachelor of Science in Animal Sciences, 126 hours required to graduate.

## [General Education Requirements](https://courses.illinois.edu/gened/DEFAULT/DEFAULT)

* Composition I
* Advanced Composition
* Public Speaking
* Cultural Studies (3 courses): Western, Non-Western, and U.S. Minority
* Foreign Language: 3 years in high school or 3rd level in college.
* Calculus I: MATH 220, 221, or 234
* Statistics: STAT 100 (ask advisor for alternatives)
* Humanities and the Arts: 2 courses
* Natural Sciences and Technology: all listed below
  + CHEM 102 and 103
  + CHEM 104 and 105
  + MCB 100 and 101
* Social and Behavioral Sciences
  + Microeconomics: ACE 100 or ECON 102
  + One other Social and Behavioral Sciences Course (cannot be an Economics course)

## College and Animal Sciences Requirements

* ACES 101 or ACES 200: ACES Orientation
* ANSC 100: Intro to Animal Sciences
* ANSC 101: Contemporary Animal Issues
* ANSC 103: Working with Farm Animals
* ANSC 221: Cells, Metabolism and Genetics
* ANSC 222: Anatomy and Physiology
* ANSC 223: Animal Nutrition
* ANSC 224: Animal Reproduction & Growth
* ANSC 298: Undergraduate Seminar
* ANSC 398: Undergraduate Experiential Learning
* ANSC 498: Integrating Animal Sciences

### Companion Animal & Equine Sciences Concentration Requirements

#### Choose 1 Combination:

* ANSC 206: Horse Management and   
  ANSC 306: Equine Science
* ANSC 250: Companion Animals in Society and   
  ANSC 307: Companion Animal Management

#### Choose 2 Applied Science Courses:

* ANSC 201: Principles of Dairy Production
* ANSC 204: Intro Dairy Cattle Evaluation
* ANSC 205: World Animal Resources
* ANSC 211: Breeding Animal Evaluation
* ANSC 219: Meat Technology
* ANSC 301: Food Animal Prod., Mgmt. & Eval.
* ANSC 305: Human Animal Interactions
* 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: Technology & Management
* ANSC 370: Companion Animal Policy
* ANSC 400: Dairy Herd Management
* ANSC 401: Beef Production
* ANSC 402: Sheep Production
* ANSC 403: Pork Production
* ANSC 404: Poultry Science
* ANSC 405: Advanced Dairy Management
* ANSC 407: Animal Shelter Management
* ANSC 424: Pet Food & Feed Manufacturing
* ANSC 435: Milk Quality and Udder Health
* ANSC 437: Adv. Reproductive Management
* ANSC 470: Companion Animal Cruelty Investigations
* ANSC 471: ANSC Leaders & Entrepreneurs

#### Choose 2 Basic Science Courses:

* ANSC 251: Epidemics and Infectious Diseases
* ANSC 350: Cellular Metabolism in Animals
* ANSC 363: Behavior of Domestic Animals
* ANSC 366: Animal Behavior
* ANSC 406: Zoo Animal Conservation Science
* ANSC 409: Meat Science
* ANSC 420: Ruminant Nutrition
* ANSC 421: Vitamins and Minerals
* 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 445: Statistical Methods
* ANSC 446: Population Genetics
* ANSC 448: Math Modeling in Life Sciences
* ANSC 449: Biological Modeling
* ANSC 450: Comparative Immunobiology
* ANSC 451: Microbes and the Animal Industry
* ANSC 452: Animal Growth and Development
* ANSC 454: Neuroimmunology
* ANSC 460: The Secret Life of Animals: Tech
* 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

#### Electives

In addition to the requirements above, you will need to take a certain number of electives that will help you reach the 126 credit hours that are needed to graduate. Students may wish to pursue a minor or take courses in a subject they have a strong interest. A large majority of our students wish to enter Veterinary School after their bachelor’s degree. Students pursuing admission to a Veterinary Medicine Program should consider using their elective credits hours to meet expected course work of that program. Some Colleges of Veterinary Medicine also require a second semester of organic chemistry. If you wish to pursue Veterinary School, it is important you research the requirements of the vet school(s) you wish to attend.

The following courses will be needed to enter Vet School at the University of Illinois:

* CHEM 232 & 233: Organic Chemistry with Lab
* MCB 450: Biochemistry
* PHYS 101 & 102: Physics I and II
* Biology with Lab: IB 150/151, MCB 150/151, or   
  IB 104

## Sample 8-Semester Plan

### First-year Fall Semester

| Courses | Credit hours |
| --- | --- |
| ACES 101 | 2 |
| ANSC 100 | 4 |
| CMN 111/101 or RHET 105 | 3-4 |
| CHEM 102 & CHEM 103 | 4 |
| Gen Eds or elective\*\* | 3 |

16-17 hours recommended.

### First-year Spring Semester

| Courses | Credit hours |
| --- | --- |
| ANSC 101 | 3 |
| CMN 101/112 or RHET 105 | 3-4 |
| CHEM 104 & CHEM 105 | 4 |
| MATH 234, 220, or 221 | 4-5 |
| Gen Eds or elective\*\* | 3 |

18 hours recommended.

### Sophomore Fall Semester

|  |  |
| --- | --- |
| Courses | Credit hours |
| ANSC 221 | 3 |
| ANSC 222 | 3 |
| ANSC 103 | 2 |
| Gen Eds or electives | 7 |

15 hours recommended.

### Sophomore Spring Semester

|  |  |
| --- | --- |
| Courses | Credit hours |
| ANSC 223 | 3 |
| ANSC 224 | 4 |
| ANSC 298 | 1 |
| Gen Eds or electives | 7 |

15 hours recommended.

### Junior Fall Semester

|  |  |
| --- | --- |
| Courses | Credit hours |
| Major/Concentration required | 3 |
| Gen Eds or electives | 13 |

16 hours recommended.

### Junior Spring Semester

|  |  |
| --- | --- |
| Courses | Credit hours |
| Major/Concentration required | 6 |
| Gen Eds or electives | 9 |

15 hours recommended.

### Senior Fall Semester

|  |  |
| --- | --- |
| Courses | Credit hours |
| ANSC 498 | 2 |
| Gen Eds or electives | 9 |
| Major/Concentration required | 6 |

17 hours recommended.

### Senior Spring Semester

|  |  |
| --- | --- |
| Courses | Credit hours |
| ANSC 498 | 2 |
| Gen Eds or electives | 6 |
| Major/Concentration required | 9 |

17 hours recommended.

#### Important Course Notes

* 500-level courses are intended for James Scholars and graduate students. If you wish to take one of these courses, you should contact the instructor directly prior to enrolling.
* ANSC 103 and ANSC 298 must be completed by the end of the Sophomore year. Each course may be taken in either the Fall or Spring semesters.
* ANSC 498 should be taken during one semester in your senior year.