

ANIMAL SCIENCES: FOOD ANIMAL PRODUCTION & MANAGEMENT, BS

for the degree of Bachelor of Science in Animal Sciences, Food Animal Production & Management concentration

The Food Animal Production and Management Concentration is designed for students intending to pursue a career in animal care and management or one of the associated food production industries. It emphasizes the scientific disciplines and the application of technology involved in animal production and animal products, as well as providing the opportunity to enhance a student's practical knowledge through business courses.

for the degree of Bachelor of Science in Animal Sciences, Food Animal Production & Management concentration

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 or ACE 100 | Microeconomic Principles or Introduction to Applied Microeconomics | 3 or 4 |
| 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 | | |
| Food Animal Production and Management Core | | |
| Select four of the following Applied Sciences courses: | | 12 |
| 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 |

for the degree of Bachelor of Science in Animal Sciences, Food Animal Production & Management concentration

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 |
| ANSC 100 | 4 |
| ANSC 198 | 2 |
| CHEM 102 | 3 |
| CHEM 103 | 1 |
| Composition I or Communication Option | 4 |
| General Education course | 3 |
| Total Hours | 17 |

| First Year | |
|---------------------------------------|-------|
| Second Semester | Hours |
| Communication Option or Composition I | 3 |
| ANSC 101 | 3 |
| CHEM 104 | 3 |

| | |
|-----------------|-----------|
| CHEM 105 | 1 |
| Calculus Option | 4 |
| | 14 |

Total Hours 14

Second Year

| First Semester | Hours |
|--------------------------|-----------|
| ANSC 221 | 3 |
| ANSC 222 | 3 |
| General Education course | 3 |
| Statistics Option | 3 |
| General Education course | 3 |
| ANSC 103 | 2 |
| | 17 |

Total Hours 17

Second Year

| Second Semester | Hours |
|---|-----------|
| ANSC 223 | 3 |
| ANSC 224 | 4 |
| ANSC 298 | 1 |
| Language Other Than English (3rd level) | 4 |
| General Education course | 3 |
| | 15 |

Total Hours 15

Third Year

| First Semester | Hours |
|--------------------------|-----------|
| Applied Science course | 3 |
| Applied Science course | 3 |
| MCB 100 | 3 |
| MCB 101 | 2 |
| General Education course | 3 |
| General Education course | 3 |
| | 17 |

Total Hours 17

Third Year

| Second Semester | Hours |
|--------------------------|-----------|
| ANSC 398 | 1 |
| Basic Sciences course | 3 |
| Basic Sciences course | 3 |
| ECON 102 or ACE 100 | 3 |
| General Education course | 3 |
| Free Elective course | 3 |
| | 16 |

Total Hours 16

Fourth Year

| First Semester | Hours |
|------------------------|-------|
| ANSC 498 | 2 |
| Applied Science course | 3 |

| | |
|----------------------|-----------|
| Free Elective course | 4 |
| Free Elective course | 3 |
| Free Elective course | 3 |
| | 15 |

Total Hours 15

Fourth Year

| Second Semester | Hours |
|------------------------|-----------|
| Applied Science course | 3 |
| Free Elective course | 3 |
| Free Elective course | 3 |
| Free Elective course | 3 |
| Free Elective course | 3 |
| | 15 |

Total Hours 15

Total Hours: 126

for the degree of Bachelor of Science Major in Animal Sciences, Food Animal Production & Management concentration

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

Prepare for a career in animal care and management or one of the associated food production industries. This concentration emphasizes the scientific disciplines and the application of technology involved in animal production and animal products, as well as providing the opportunity to enhance a student's practical knowledge through adding a minor. Common minors added with this concentration are business, communications, and leadership.

- This concentration is ideal for students who own or would like to operate animal production units, including the management of dairy, beef, poultry, sheep, or swine enterprises.
- Students may choose to work in animal production agriculture or continue their education in animal sciences or business-related disciplines.
- After sophomore year, students may choose to focus the remainder of their studies on a particular species (beef, swine, dairy) or the discipline of their choice (nutrition, reproduction, meat science).
- Graduates are in high demand because of their dual focus on animal production and business and pursue careers in the sales and service

of animal health products, feed, equipment, and more. They are livestock representatives for banks and insurance companies, and work as consultants to animal agriculture industries. Some graduates pursue careers in the meat or food processing industries.

for the degree of Bachelor of Science in Animal Sciences, Food Animal Production & Management concentration

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/](https://ansc.illinois.edu/about/contact-us/#paragraph-499)

#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

visitACES@illinois.edu