

ANIMAL AND VETERINARY BIOSCIENCES, BS

REQUIREMENTS

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

All undergraduate students at the University of Wisconsin–Madison are required to fulfill a minimum set of common university general education requirements to ensure that every graduate acquires the essential core of an undergraduate education. This core establishes a foundation for living a productive life, being a citizen of the world, appreciating aesthetic values, and engaging in lifelong learning in a continually changing world. Various schools and colleges will have requirements in addition to the requirements listed below. Consult your advisor for assistance, as needed. For additional information, see the university Undergraduate General Education Requirements (<http://guide.wisc.edu/undergraduate/#requirementsforundergraduatestudytext>) section of the *Guide*.

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|-------------------|--|
| General Education | <ul style="list-style-type: none"> • Breadth–Humanities/Literature/Arts: 6 credits • Breadth–Natural Science: 4 to 6 credits, consisting of one 4- or 5-credit course with a laboratory component; or two courses providing a total of 6 credits • Breadth–Social Studies: 3 credits • Communication Part A & Part B * • Ethnic Studies * • Quantitative Reasoning Part A & Part B * |
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* The mortarboard symbol appears before the title of any course that fulfills one of the Communication Part A or Part B, Ethnic Studies, or Quantitative Reasoning Part A or Part B requirements.

COLLEGE OF AGRICULTURAL AND LIFE SCIENCES REQUIREMENTS

In addition to the University General Education Requirements, all undergraduate students in CALS must satisfy a set of college and major requirements. Courses may not double count within university requirements (General Education and Breadth) or within college requirements (First-Year Seminar, International Studies, Science, and Capstone), but courses counted toward university requirements may also be used to satisfy a college and/or a major requirement; similarly, courses counted toward college requirements may also be used to satisfy a university and/or a major requirement.

COLLEGE REQUIREMENTS FOR ALL CALS BS DEGREE PROGRAMS

| Code | Title | Credits |
|---|--|---------|
| Quality of Work: Students must maintain a minimum cumulative grade point average of 2.000 to remain in good standing and be eligible for graduation. | | |
| Residency: Students must complete 30 degree credits in residence at UW–Madison after earning 86 credits toward their undergraduate degree. | | |
| | first year seminar/ (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/animal-dairy-sciences/calsfirstyearseminarcourses/) | 1 |
| | international studies/ (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/animal-dairy-sciences/calsinternationalstudiescourses/) | 3 |
| | Physical science fundamentals | 4-5 |
| CHEM 103 or CHEM 108 or CHEM 109 | General Chemistry I Chemistry in Our World Advanced General Chemistry | |
| | Biological science | 5 |
| | Additional science (biological, physical, or natural) | 3 |
| | Science breadth (biological, physical, natural, or social) | 3 |
| cals capstone learning experience: included in the requirements for each cals major (see “major requirements”)/ (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/animal-dairy-sciences/calscapstonerequirement/) | | |

SUMMARY OF MAJOR REQUIREMENTS

| Code | Title | Credits |
|---------------------------|---|--------------|
| Major Requirements | | |
| | Mathematics and Science Foundation | 19-25 |
| | Animal & Veterinary Biosciences Core Requirements | 37-38 |
| | Capstone in Major | 2-3 |
| Total Credits | | 58-66 |

ANIMAL & VETERINARY BIOSCIENCES MAJOR REQUIREMENTS

| Code | Title | Credits |
|--|---|---------|
| Mathematics | | |
| Complete one of the following (or may be satisfied by placement exam): | | 3-5 |
| MATH 112 | Algebra | |
| MATH 114 | Algebra and Trigonometry | |
| Statistics | | |
| Complete one of the following: | | 3 |
| STAT 301 | Introduction to Statistical Methods | |
| STAT 371 | Introductory Applied Statistics for the Life Sciences | |
| Chemistry | | |
| Complete one of the following: | | 5-9 |

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| CHEM 103 & CHEM 104 | General Chemistry I and General Chemistry II |
| CHEM 109 | Advanced General Chemistry |

Biology

Complete one of the following: 5

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| BIOLOGY/ BOTANY/ ZOOLOGY 151 | Introductory Biology |
| BIOLOGY/ ZOOLOGY 101 & BIOLOGY/ ZOOLOGY 102 | Animal Biology and Animal Biology Laboratory |

Biochemistry

Complete one of the following: 3

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| BIOCHEM 301 | Survey of Biochemistry |
| BIOCHEM 501 | Introduction to Biochemistry |

Introduction to the Major

Complete the following: 4

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| AN SCI/ DY SCI 101 | Introduction to Animal Sciences |
| AN SCI/ DY SCI 102 | Introduction to Animal Sciences Laboratory |

Animal Science CoreComplete four courses from the following: ¹ 11-12

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| AN SCI 245 | Animal Welfare |
| AN SCI/DY SCI/ NUTR SCI 311 | Comparative Animal Nutrition |
| AN SCI/ DY SCI 320 | Animal Health and Disease |
| AN SCI/ DY SCI 361 | Introduction to Animal and Veterinary Genetics |
| AN SCI/ DY SCI 373 | Animal Physiology |

Animal Biology Depth

Complete at least 10 credits from the following: 10

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| AN SCI 245 | Animal Welfare ¹ |
| AN SCI/ FOOD SCI 305 | Introduction to Meat Science and Technology |
| AN SCI/DY SCI/ NUTR SCI 311 | Comparative Animal Nutrition ¹ |
| AN SCI/ DY SCI 320 | Animal Health and Disease ¹ |
| AN SCI 336 | Animal Growth and Development |
| AN SCI/ DY SCI 361 | Introduction to Animal and Veterinary Genetics ¹ |
| AN SCI/ DY SCI 362 | Veterinary Genetics |
| or AN SCI/ DY SCI 363 | Principles of Animal Breeding |
| AN SCI 366 | Concepts in Genomics |
| AN SCI/ DY SCI 373 | Animal Physiology ¹ |
| DY SCI 378 | Lactation Physiology |
| AN SCI/ DY SCI 414 | Ruminant Nutrition & Metabolism |

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| AN SCI 415 | Application of Monogastric Nutrition Principles |
| AN SCI 420 | Microbiomes of Animal Systems |
| AN SCI/ DY SCI 434 | Reproductive Physiology |

Major Breadth

Complete at least 12 credits from the following: 12

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| AN SCI 200 | The Biology and Appreciation of Companion Animals |
| DY SCI 233 | Dairy Herd Management I |
| DY SCI 234 | Dairy Herd Management II |
| AN SCI/BSE 344 | Digital Technologies for Animal Monitoring |
| AN SCI 399 | Coordinative Internship/ Cooperative Education (Footnote 2 applies to both AN SCI 399 and 699) ² |
| or AN SCI 699 | Special Problems |
| A A E 422 | Food Systems and Supply Chains |
| AN SCI 431 | Beef Cattle Production |
| AN SCI 432 | Swine Production |
| AN SCI/ FOOD SCI 515 | Commercial Meat Processing |
| DY SCI 534 | Reproductive Management of Dairy Cattle |
| BIOLOGY/ BOTANY/ ZOOLOGY 152 | Introductory Biology |
| or BIOLOGY/ BOTANY 130 | General Botany |
| CHEM 343 | Organic Chemistry I |
| PHYSICS 103 | General Physics |
| MICROBIO 303 | Biology of Microorganisms |
| M M & I/ENTOM/ PATH-BIO/ ZOOLOGY 350 | Parasitology |

Capstone in Major

Complete one of the following: 2-3

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| AN SCI 435 | Animal Sciences Proseminar |
| DY SCI 535 | Dairy Farm Management Practicum |

Total Credits 58-66¹ Courses cannot count for both Animal Science Core and Depth.² Maximum of 3 credits.

HONORS IN THE MAJOR

Students admitted to the university and to the College of Agricultural and Life Sciences are invited to apply to be considered for admission to the CALS Honors Program.

Admission Criteria for New First-Year Students:

- Complete program application including essay questions

Admission Criteria for Transfer and Continuing UW-Madison Students:

- UW-Madison cumulative GPA of at least 3.25
- Complete program application including essay questions

HOW TO APPLY

The application is available on the CALS Honors Program website (<https://cals.wisc.edu/academics/undergraduate/current-students/honors-program/>). Applications are accepted at any time.

New first-year students with accepted applications will automatically be enrolled in Honors in Research. It is possible to switch to Honors in the Major in the student's first semester on campus after receiving approval from the advisor for that major. Transfer and continuing students may apply directly to Honors in Research or Honors in the Major (after approval from the major advisor).

REQUIREMENTS

All CALS Honors programs have the following requirements:

- Earn at least a cumulative 3.25 GPA at UW-Madison (some programs have higher requirements)
- Complete the program-specific requirements listed below
- Submit completed thesis documentation to CALS Academic Affairs

REQUIREMENTS

To earn honors in the major, students are required to take at least 20 honors credits. In addition, students must take AN SCI 681 Senior Honor Thesis and AN SCI 682 Senior Honors Thesis when completing their thesis project; please see the honors program page (<https://cals.wisc.edu/academics/undergraduate/current-students/honors-program/>) for more information.

UNIVERSITY DEGREE REQUIREMENTS

Total Degree To receive a bachelor's degree from UW-Madison, students must earn a minimum of 120 degree credits. The requirements for some programs may exceed 120 degree credits. Students should consult with their college or department advisor for information on specific credit requirements.

Residency Degree candidates are required to earn a minimum of 30 credits in residence at UW-Madison. "In residence" means on the UW-Madison campus with an undergraduate degree classification. "In residence" credit also includes UW-Madison courses offered in distance or online formats and credits earned in UW-Madison Study Abroad/Study Away programs.

Quality of Work Undergraduate students must maintain the minimum grade point average specified by the school, college, or academic program to remain in good academic standing. Students whose academic performance drops below these minimum thresholds will be placed on academic probation.