ANIMAL SCIENCES, 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.

General Education

- 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 *

* 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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>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.</td>
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<tr>
<td></td>
<td>Residency: Students must complete 30 degree credits in residence at UW–Madison after earning 86 credits toward their undergraduate degree.</td>
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</tbody>
</table>

First year seminar (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSFirstYearSeminarCourses) 1

International studies (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSInternationalStudiesCourses) 3

Physical science fundamentals 4-5

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 103</td>
<td>General Chemistry I</td>
<td></td>
</tr>
<tr>
<td>or CHEM 108</td>
<td>Chemistry in Our World</td>
<td></td>
</tr>
<tr>
<td>or CHEM 109</td>
<td>Advanced General Chemistry</td>
<td></td>
</tr>
</tbody>
</table>

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/#CALSCapstoneRequirement)

MAJOR REQUIREMENTS

Courses may not double count within the major (unless specifically noted otherwise), but courses counted toward the major requirements may also be used to satisfy a university requirement and/or a college requirement. A minimum of 15 credits must be completed in the major that are not used elsewhere.

Mathematics and Statistics

Select one of the following (or may be satisfied by placement exam): 1

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 112 &amp; MATH 113</td>
<td>Algebra and Trigonometry</td>
<td></td>
</tr>
<tr>
<td>MATH 114</td>
<td>Algebra and Trigonometry</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following: 3-4

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 301</td>
<td>Introduction to Statistical Methods</td>
<td></td>
</tr>
<tr>
<td>STAT 371</td>
<td>Introductory Applied Statistics for the Life Sciences</td>
<td></td>
</tr>
</tbody>
</table>

Chemistry

Select one of the following: 5-10

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 103 &amp; CHEM 104</td>
<td>General Chemistry I and General Chemistry II</td>
<td></td>
</tr>
<tr>
<td>CHEM 109</td>
<td>Advanced General Chemistry</td>
<td></td>
</tr>
</tbody>
</table>

Biology

Select one of the following: 13

Option 1:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOLOGY/ BOTANY/ ZOOLOGY 151</td>
<td>Introductory Biology</td>
<td></td>
</tr>
<tr>
<td>ZOOLOGY/ BIOLOGY/ BOTANY 152</td>
<td>Introductory Biology</td>
<td></td>
</tr>
</tbody>
</table>

Option 2:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ZOOLOGY/ BIOLOGY 101</td>
<td>Animal Biology</td>
<td></td>
</tr>
<tr>
<td>ZOOLOGY/ BIOLOGY 102</td>
<td>Animal Biology Laboratory</td>
<td></td>
</tr>
</tbody>
</table>
BOTANY/BIOLOGY 130  General Botany

Option 3:

BIOCORE 381  Evolution, Ecology, and Genetics
BIOCORE 382  Evolution, Ecology, and Genetics Laboratory
BIOCORE 383  Cellular Biology
BIOCORE 384  Cellular Biology Laboratory

Genetics
GENETICS 466  Principles of Genetics 3

Animal Sciences Core 2
AN SCI/DY SCI 101  Introduction to Animal Sciences 3
AN SCI/DY SCI 102  Introduction to Animal Sciences Laboratory 1
AN SCI/FOOD SCI 305  Introduction to Meat Science and Technology 4
AN SCI/DY SCI/ NUTR SCI 311  Comparative Animal Nutrition 3
AN SCI/DY SCI 320  Animal Health and Disease 3
AN SCI/DY SCI 361  Introduction to Animal and Veterinary Genetics 2
AN SCI/DY SCI 362  Veterinary Genetics 2
or AN SCI/ DY SCI 363  Principles of Animal Breeding
AN SCI/DY SCI 373  Animal Physiology 3
or AN SCI/ DY SCI 434  Reproductive Physiology

Animal Science Depth
Select 12 credits from animal science depth courses 2 12

Emphasis
Select an emphasis 24-25

Capstone
AN SCI 435  Animal Sciences Proseminar 2

Total Credits 88-96

1 Science Emphasis students may choose to complete MATH 171 Calculus with Algebra and Trigonometry I and MATH 217 Calculus with Algebra and Trigonometry II in place of MATH 114 Algebra and Trigonometry and MATH 221 Calculus and Analytic Geometry I.

2 A course cannot be used for credit in both the Core and Depth within major sections.

DEPTH COURSES

Select 12 credits from the following:

AN SCI/ FOOD SCI 321  Food Laws and Regulations 1
AN SCI 336  Animal Growth and Development 3
AN SCI/DY SCI 362  Veterinary Genetics 2
or AN SCI/DY SCI 363  Principles of Animal Breeding
AN SCI 366  Concepts in Genomics 3
AN SCI/DY SCI 370  Livestock Production and Health in Agricultural Development 1 3

EMPHASIS COURSES

SCIENCE EMPHASIS

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 221</td>
<td>Calculus and Analytic Geometry I</td>
<td>5</td>
</tr>
<tr>
<td>or MATH 217</td>
<td>Calculus with Algebra and Trigonometry II</td>
<td></td>
</tr>
<tr>
<td>PHYSICS 103</td>
<td>General Physics</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 343</td>
<td>Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>BIOCHEM 501</td>
<td>Introduction to Biochemistry</td>
<td>3</td>
</tr>
</tbody>
</table>

Select 9 credits from the following: 9

CHEM 344  Introductory Organic Chemistry Laboratory
CHEM 345  Organic Chemistry II
MICROBIO 303  Biology of Microorganisms
MICROBIO 304  Biology of Microorganisms Laboratory
M M & I 341  Immunology
M M & I/PATH- BIO 528  Immunology
PHYSICS 104  General Physics
PSYCH 449  Animal Behavior

Total Credits 24

BUSINESS EMPHASIS

Up to two courses may be applied to Certificate in Business Mgmt. for Ag. & Life Sciences.
Code | Title | Credits
--- | --- | ---
A A E 101 | Introduction to Agricultural and Applied Economics | 4
or ECON 101 | Principles of Microeconomics | 
A A E 320 | Agricultural Systems Management | 3
A A E 322 | Commodity Markets | 4
Select one of the following: | Human Resource Management | 3
M H R 305 | Fundamentals of Accounting and Finance for Non-Business Majors | 
GEN BUS 310 | Fundamentals of Accounting and Finance for Non-Business Majors | 
GEN BUS 311 | Fundamentals of Accounting and Finance for Non-Business Majors | 
Select one of the following: | Survey of Biochemistry | 3
BIOCHEM 301 | Elementary Organic Chemistry | 
CHEM 341 | Introduction to Biochemistry | 
Select 9 credits from the following: | Agricultural Finance | 
A A E 419 | Introductory Financial Accounting | 
or ACCT I S 300 | Accounting Principles | 
AGRONOMY/ HORT/ SOIL SCI 326 | Plant Nutrition Management | 
ECON/FINANCE 300 | Introduction to Finance | 
M H R 300 | Managing Organizations | 
MARKETING 300 | Marketing Management | 
MATH 217 | Calculus with Algebra and Trigonometry II | 
or MATH 221 | Calculus and Analytic Geometry I | 
MICROBIO 303 | Biology of Microorganisms | 
MICROBIO 304 | Biology of Microorganisms | 
PHYSICS 103 | General Physics | 
SOIL SCI 301 | General Soil Science | 
Total Credits | 26

1 A A E 101 Introduction to Agricultural and Applied Economics not accepted as a prerequisite for some advanced Business courses.

**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

**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.