DAIRY SCIENCE, B.S.

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 B.S. 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>
<td></td>
</tr>
<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)

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

Physical Science Fundamentals

<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>4</td>
</tr>
<tr>
<td>or CHEM 108</td>
<td>Chemistry in Our World</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 109</td>
<td>Advanced General Chemistry</td>
<td>5</td>
</tr>
</tbody>
</table>

Biological Science

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Additional Science (Biological, Physical, or Natural)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Science Breadth (Biological, Physical, Natural, or Social)</td>
<td>3</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mathematics and Statistics</td>
<td>3-5</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 112</td>
<td>Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 114</td>
<td>Algebra and Trigonometry</td>
<td></td>
</tr>
<tr>
<td>MATH 171</td>
<td>Calculus with Algebra and Trigonometry I</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 301</td>
<td>Introduction to Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>or STAT 371</td>
<td>Introductory Applied Statistics for the Life Sciences</td>
<td></td>
</tr>
</tbody>
</table>

Chemistry

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 103 &amp; CHEM 104</td>
<td>General Chemistry I and General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 109</td>
<td>Advanced General Chemistry</td>
<td>5</td>
</tr>
</tbody>
</table>

Biology

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
</table>
| Option 1:  
ZOOGOLOGY/BIOLGY 101 | Animal Biology                           | 9-10    |
|        | ZOOLOGY/BIOLGY 102 | Animal Biology Laboratory               |         |
|        | AGRONOMY 100 | Principles and Practices in Crop Production |         |
| Option 2:  
ZOOGOLOGY/BIOLGY 101 | Animal Biology                           | 9-10    |
|        | ZOOLOGY/BIOLGY 102 | Animal Biology Laboratory               |         |
|        | BOTANY/BIOLGY 130 | General Botany                          |         |
| Option 3:  
ZOOGOLOGY/BIOLGY 101 | Animal Biology                           | 9-10    |
Dairy Science, B.S.

**BIOLOGY/ BOTANY/ ZOOLOGY 151**
Introductory Biology

**BIOLOGY/ BOTANY/ ZOOLOGY 152**
Introductory Biology

Select one of the following: 3

- GENETICS 466 Principles of Genetics
- CHEM 341 Elementary Organic Chemistry
- CHEM 343 Organic Chemistry I
- MICROBIO 101 General Microbiology
- MICROBIO 303 Biology of Microorganisms
- M M & I 341 Immunology

**Biochemistry**
Select one of the following: 3-6

- BIOCHEM 301 Survey of Biochemistry
- BIOCHEM 501 Introduction to Biochemistry
- BIOCHEM 507 & BIOCHEM 508 General Biochemistry I and General Biochemistry II

**Economics**
Select one of the following: 4

- A A E 215 Introduction to Agricultural and Applied Economics
- ECON 101 Principles of Microeconomics

**Dairy Science Core**

- AN SCI/DY SCI 101 Introduction to Animal Sciences 3
- AN SCI/DY SCI 102 Introduction to Animal Sciences Laboratory 1
- DY SCI 233 Dairy Herd Management I 3
- DY SCI 234 Dairy Herd Management II 3
- AN SCI/DY SCI/ NUTR SCI 311 Comparative Animal Nutrition 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
- DY SCI 378 Lactation Physiology 3
- AN SCI/DY SCI 414 Ruminant Nutrition & Metabolism 3
- AN SCI/DY SCI 434 Reproductive Physiology 3

**Capstone**

- DY SCI 399 Coordinative Internship/ Cooperative Education 1-8
- DY SCI 535 Dairy Farm Management Practicum 3

**Dairy Science Electives**
Select at least 3 credits from: 3

- AN SCI 135 Grand Challenges and Career Opportunities in Animal and Dairy Sciences
- DY SCI 205 Dairy Cattle Improvement Programs
- DY SCI 289 Honors Independent Study
- DY SCI 299 Independent Study

**DY SCI/ AN SCI 370** Livestock Production and Health in Agricultural Development

**DY SCI 375** Special Topics

**DY SCI/ AGRONOMY 471** Food Production Systems and Sustainability

**DY SCI/ AN SCI/ FOOD SCI/ SOIL SCI 472** Animal Agriculture and Global Sustainable Development

**DY SCI/AN SCI/ FOOD SCI/ SOIL SCI 473** International Field Study in Animal Agriculture and Sustainable Development

**DY SCI 534** Reproductive Management of Dairy Cattle

**DY SCI 681** Senior Honors Thesis

**DY SCI 682** Senior Honors Thesis

**DY SCI 699** Special Problems

**Total Credits** 65-79

1 Consult with your advisor for details.

**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.