

# 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*.

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| General Education | <ul style="list-style-type: none"> <li>• Breadth—Humanities/Literature/Arts: 6 credits</li> <li>• 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</li> <li>• Breadth—Social Studies: 3 credits</li> <li>• Communication Part A &amp; Part B *</li> <li>• Ethnic Studies *</li> <li>• Quantitative Reasoning Part A &amp; Part B *</li> </ul> |
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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 B.S. 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 ( <a href="http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#requirements#text">http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#requirements#text</a> )		1

International Studies ( <a href="http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#requirements#text">http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#requirements#text</a> )		3
Physical Science Fundamentals		4-5
CHEM 103	General Chemistry I	
or CHEM 108	Chemistry in Our World	
or CHEM 109	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") ( <a href="http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#requirements#text">http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#requirements#text</a> )		

### MAJOR REQUIREMENTS

Code	Title	Credits
<b>Mathematics and Statistics</b>		
Select one of the following (or may be satisfied by placement exam):		3-5
MATH 112	Algebra	
MATH 114	Algebra and Trigonometry	
MATH 171	Calculus with Algebra and Trigonometry I	
Select one of the following:		3
STAT 301	Introduction to Statistical Methods	
or STAT 371	Introductory Applied Statistics for the Life Sciences	
<b>Chemistry</b>		
Select one of the following:		4-5
CHEM 103 & CHEM 104	General Chemistry I and General Chemistry II	
CHEM 109	Advanced General Chemistry	
<b>Biology</b>		
Select one of the following options:		9-10
Option 1:		
ZOOLOGY/ BIOLOGY 101	Animal Biology	
ZOOLOGY/ BIOLOGY 102	Animal Biology Laboratory	
AGRONOMY 100	Principles and Practices in Crop Production	
Option 2:		
ZOOLOGY/ BIOLOGY 101	Animal Biology	
ZOOLOGY/ BIOLOGY 102	Animal Biology Laboratory	
BOTANY/ BIOLOGY 130	General Botany	
Option 3:		
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	
<b>Biochemistry</b>		
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	
<b>Economics</b>		
Select one of the following:		4
A A E 215	Introduction to Agricultural and Applied Economics	
ECON 101	Principles of Microeconomics	
<b>Dairy Science Core</b>		
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 or AN SCI/DY SCI 363	Veterinary Genetics Principles of Animal Breeding	2
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
<b>Capstone</b>		
DY SCI 399	Coordinative Internship/Cooperative Education	1-8
DY SCI 535	Dairy Farm Management Practicum	3
<b>Dairy Science Electives</b>		
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 <sup>1</sup>	
DY SCI 299	Independent Study <sup>1</sup>	
DY SCI/ AN SCI 370	Livestock Production and Health in Agricultural Development	
DY SCI 375	Special Topics <sup>1</sup>	

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 <sup>1</sup>
DY SCI 682	Senior Honors Thesis <sup>1</sup>
DY SCI 699	Special Problems <sup>1</sup>

**Total Credits** 65-79

<sup>1</sup>

Consult with your advisor for details.

## UNIVERSITY DEGREE REQUIREMENTS

<b>Total Degree</b>	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.
<b>Residency</b>	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.
<b>Quality of Work</b>	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.