

# AGRONOMY, 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	<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 Part B *</li> <li>• Ethnic Studies *</li> <li>• Quantitative Reasoning Part A 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 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 ( <a href="http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSThirdYearSeminarCourses">http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSThirdYearSeminarCourses</a> )		1
International studies ( <a href="http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSIInternationalStudiesCourses">http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSIInternationalStudiesCourses</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/#CALSCapstoneRequirement">http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSCapstoneRequirement</a> )		

### MAJOR REQUIREMENTS

Code	Title	Credits
<b>Mathematics and Statistics</b>		
Complete one of the following (or may be satisfied by placement exam):		5-6
MATH 112 & MATH 113	Algebra and Trigonometry	
MATH 114	Algebra and Trigonometry	
MATH 171	Calculus with Algebra and Trigonometry I	
MATH 211	Survey of Calculus	
MATH 221	Calculus and Analytic Geometry 1	
Complete one of the following:		3
STAT 301	Introduction to Statistical Methods	
STAT 371	Introductory Applied Statistics for the Life Sciences	
STAT/B M I 541	Introduction to Biostatistics	
STAT/F&W ECOL/ HORT 571	Statistical Methods for Bioscience I	
<b>Chemistry</b>		
Complete one of the following:		5-9
CHEM 103 & CHEM 104	General Chemistry I and General Chemistry II	
CHEM 109	Advanced General Chemistry	
<b>Biology</b>		
Complete one of the following options:		10
Option 1:		
BOTANY/ BIOLOGY 130	General Botany	
ZOOLOGY/ BIOLOGY 101	Animal Biology	
ZOOLOGY/ BIOLOGY 102	Animal Biology Laboratory	
Option 2:		

BIOLOGY/ BOTANY/ ZOOLOGY 151 & ZOOLOGY/ BIOLOGY/ BOTANY 152	Introductory Biology and Introductory Biology	
Option 3:		
BIOCORE 381	Evolution, Ecology, and Genetics	
BIOCORE 382	Evolution, Ecology, and Genetics Laboratory	
BIOCORE 383	Cellular Biology	
BIOCORE 384	Cellular Biology Laboratory	
<b>Economics</b>		
Complete one of the following:		3-4
A A E 101	Introduction to Agricultural and Applied Economics	
ECON 101	Principles of Microeconomics	
ECON 111	Principles of Economics- Accelerated Treatment	
<b>Foundation</b>		
Complete 8 credits from any Foundation category (see list below)		8
<b>Core</b>		
Complete all of the following:		12
AGRONOMY 100	Principles and Practices in Crop Production	
SOIL SCI 301 & SOIL SCI 302	General Soil Science and Meet Your Soil: Soil Analysis and Interpretation Laboratory	
PL PATH 300	Introduction to Plant Pathology	
Complete one of the following:		3
GENETICS 466	Principles of Genetics	
AGRONOMY/ HORT 338	Plant Breeding and Biotechnology	
Complete one of the following:		3-4
ENTOM/ ZOOLOGY 302	Introduction to Entomology	
ENTOM 351	Principles of Economic Entomology	
Complete one of the following:		3-4
AGRONOMY/ BOTANY/SOIL SCI 370	Grassland Ecology	
BOTANY/F&W ECOL 455	The Vegetation of Wisconsin	
BOTANY/F&W ECOL/ZOOLOGY 460	General Ecology	
ENVIR ST/LAND ARC 361	Wetlands Ecology	
<b>Electives within the Major</b>		
Complete 14 additional credits of Agronomy courses <sup>1</sup>		14
<b>Capstone</b>		
AGRONOMY 500	Senior Capstone Experience	2
<b>Total Credits</b>		<b>71-79</b>

<sup>1</sup> No more than 3 credits total in AGRONOMY 299 Independent Study, AGRONOMY 399 Coordinative Internship/Cooperative Education, AGRONOMY 699 Special Problems. Credits used to satisfy the capstone experience may not count here.

## FOUNDATION COURSES

### AG SOCIAL SCIENCE

Code	Title	Credits
A A E 319	The International Agricultural Economy	3
A A E 320	Agricultural Systems Management	3
A A E 322	Commodity Markets	4
A A E 323	Cooperatives and Alternative Forms of Enterprise Ownership	3
A A E/ECON 421	Economic Decision Analysis	4
A A E/ECON 474	Economic Problems of Developing Areas	3
C&E SOC/SOC 140	Introduction to Community and Environmental Sociology	4
C&E SOC/SOC 222	Food, Culture, and Society	3
C&E SOC/ AMER IND/SOC 578	Poverty and Place	3
C&E SOC/SOC 650	Sociology of Agriculture	3

### ANIMAL SCIENCE

Code	Title	Credits
AN SCI/DY SCI 101	Introduction to Animal Sciences	3
AN SCI 200	The Biology and Appreciation of Companion Animals	3
AN SCI/DY SCI/ NUTR SCI 311	Comparative Animal Nutrition	3
AN SCI 431	Beef Cattle Production	3
AN SCI 432	Swine Production	3
DY SCI 205	Dairy Cattle Improvement Programs	2
DY SCI/AN SCI 361	Introduction to Animal and Veterinary Genetics	2
DY SCI/AN SCI 363	Principles of Animal Breeding	2
DY SCI/AN SCI 370	Livestock Production and Health in Agricultural Development	3
DY SCI 378	Lactation Physiology	3
ENTOM/ ZOOLOGY 302	Introduction to Entomology	4
ENTOM 351	Principles of Economic Entomology	3

### ATMOSPHERIC SCIENCE

Code	Title	Credits
ATM OCN 100	Weather and Climate	3
ATM OCN/ ENVIR ST 171	Global Change: Atmospheric Issues and Problems	2-3

### BIOLOGICAL SYSTEMS ENGINEERING

Code	Title	Credits
BSE 301	Land Information Management	3

**FOOD SCIENCE**

Code	Title	Credits
FOOD SCI 120	Science of Food	3
FOOD SCI 440	Principles of Food Engineering	3
A A E/C&E SOC/ SOC 340	Issues in Food Systems	3-4
NUTR SCI/ BIOCHEM 510	Nutritional Biochemistry and Metabolism	3

**MANAGEMENT**

Code	Title	Credits
ACCT I S 211	Introductory Managerial Accounting	3
ACCT I S 301	Financial Reporting I	3
ACCT I S 302	Financial Reporting II	3
ACCT I S 401	Business Organizations and Negotiable Instruments	3
A A E 320	Agricultural Systems Management	3
A A E 322	Commodity Markets	4
A A E 323	Cooperatives and Alternative Forms of Enterprise Ownership	3
A A E 419	Agricultural Finance	3
A A E/ECON 421	Economic Decision Analysis	4
A A E/ECON 474	Economic Problems of Developing Areas	3
GEN BUS 301	Business Law	3
FINANCE/ ECON 300	Introduction to Finance	3
INTL BUS 200	International Business	3
MARKETNG 305	Consumer Behavior	3
MARKETNG 310	Marketing Research	3
MARKETNG/ INTL BUS 420	Global Marketing Strategy	3
MARKETNG 424	Sales Strategy and Management	3
MARKETNG 426	Strategic Retailing	3
MARKETNG 460	Marketing Strategy	3
M H R 322	Introduction to Entrepreneurship	3
M H R 420	Leading Change in Organizations	3
M H R 612	Labor-Management Relations	3
R M I 300	Principles of Risk Management	3

**NUTRITIONAL SCIENCE**

Code	Title	Credits
NUTR SCI 132	Nutrition Today	3
NUTR SCI/AN SCI/ DY SCI 311	Comparative Animal Nutrition	3
NUTR SCI 332	Human Nutritional Needs	3
NUTR SCI/A A E/ AGRONOMY 350	World Hunger and Malnutrition	3

**SOIL SCIENCE**

Code	Title	Credits
SOIL SCI/ ENVIR ST 324	Soils and Environmental Quality	3

**BACTERIOLOGY, BIOCHEMISTRY, GENETICS**

Code	Title	Credits
MICROBIO 101	General Microbiology	3
MICROBIO 102	General Microbiology Laboratory	2
MICROBIO 303	Biology of Microorganisms	3
MICROBIO 304	Biology of Microorganisms Laboratory	2
MICROBIO/ FOOD SCI 324	Food Microbiology Laboratory	2
MICROBIO/ FOOD SCI 325	Food Microbiology	3
BIOCHEM 501	Introduction to Biochemistry	3
GENETICS 466	Principles of Genetics	3

**ECOLOGICAL SCIENCES**

Code	Title	Credits
F&W ECOL/ ENVIR ST 100	Forests of the World	3
F&W ECOL 318	Principles of Wildlife Ecology	3
F&W ECOL/ BOTANY 455	The Vegetation of Wisconsin	4
F&W ECOL/ BOTANY/ ZOOLOGY 460	General Ecology	4
F&W ECOL 550	Forest Ecology	3

**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.