

AGRONOMY, 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"> • 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 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 (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#requirements) | | 1 |

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

MAJOR REQUIREMENTS

| Code | Title | Credits |
|--|---|---------|
| Mathematics and Statistics | | |
| Select 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 | Calculus | |
| MATH 221 | Calculus and Analytic Geometry 1 | |
| Select 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 | |
| Chemistry | | |
| Select one of the following: | | 5-9 |
| CHEM 103 & CHEM 104 | General Chemistry I and General Chemistry II | |
| CHEM 109 | Advanced General Chemistry | |
| Biology | | |
| Select 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 | |

Economics

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| Select one of the following: | | 3-4 |
| A A E 215 | Introduction to Agricultural and Applied Economics | |
| ECON 101 | Principles of Microeconomics | |
| ECON 111 | Principles of Economics-Accelerated Treatment | |

Foundation

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|---|--|---|
| Select 8 credits from any foundation category | | 8 |
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Core

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|------------------------------|---|---|
| AGRONOMY 100 | Principles and Practices in Crop Production | 4 |
| SOIL SCI 301 | General Soil Science | 4 |
| PL PATH 300 | Introduction to Plant Pathology | 4 |
| Select one of the following: | | 3 |

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|-----------------------|----------------------------------|--|
| GENETICS 466 | Principles of Genetics | |
| AGRONOMY/ HORT 338 | Plant Breeding and Biotechnology | |

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| Select one of the following: | | 3-4 |
| ENTOM/ ZOOLOGY 302 | Introduction to Entomology | |
| ENTOM 351 | Principles of Economic Entomology | |

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| Select one of the following: | | 3-4 |
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| 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 | |

Electives within the Major

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|---|--|----|
| Select 14 additional credits of Agronomy courses ¹ | | 14 |
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Capstone

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| AGRONOMY 500 | Senior Capstone Experience | 2 |
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Total Credits 71-79

¹

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/ HIST SCI 230 | Agriculture and Social Change in Western History | 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 |
| 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 |
| GEN BUS 302 | Business Organizations and Negotiable Instruments | 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 420 | Managing Change and Organizational Effectiveness | 3 |
| M H R 422 | Entrepreneurial Management | 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 |
| SOIL SCI 325 | Soils and Landscapes | 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.