

AGRICULTURAL AND APPLIED ECONOMICS, B.S.

The Agricultural and Applied Economics (AAE) major provides students with a strong base in economics and how it is applied to real-world situations. Students develop and use economic data and models to analyze and understand a wide range of issues—including environmental problems, world hunger, energy and climate change, business economics and finance, economic development, globalization and trade, biotechnology, land-use management, and community development. Course subjects include economics, environmental economics, managerial economics, financial management, commodities and futures markets, the global economy, development in Latin America, Africa, and Asia, cooperatives, international trade, pollution, and regulation. Students acquire the necessary skills to pursue a rewarding career in consulting, government, business, or international organizations, or a graduate degree in economics, public policy, business or law.

Students completing the Agricultural and Applied Economics major are awarded the bachelor of science degree.

HOW TO GET IN

To declare this major, students must be admitted to UW–Madison and the College of Agricultural and Life Sciences (CALs). For information about becoming a CALs first-year or transfer student, see *Entering the College* (<http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#enteringthecolletext>).

Students who attend Student Orientation, Advising, and Registration (SOAR) with the College of Agricultural and Life Sciences have the option to declare this major at SOAR. Students may otherwise declare after they have begun their undergraduate studies. For more information, contact the advisor listed under the Advising and Careers tab.

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/#requirementsstext)	1
	International Studies (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#requirementsstext)	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/#requirementsstext)		

MAJOR REQUIREMENTS

Code	Title	Credits
Mathematics and Statistics		
This major requires calculus. Prerequisites may need to be taken before enrollment in calculus.		
Select one of the following:		5
MATH 211	Calculus	
MATH 217	Calculus with Algebra and Trigonometry II	
MATH 221	Calculus and Analytic Geometry 1	
Select one of the following:		3-6
ECON 310	Statistics: Measurement in Economics	
STAT 301	Introduction to Statistical Methods	
STAT 324	Introductory Applied Statistics for Engineers	
STAT 371	Introductory Applied Statistics for the Life Sciences	
PSYCH 210	Basic Statistics for Psychology	
SOC/ C&E SOC 360	Statistics for Sociologists I	
GEN BUS 306 & GEN BUS 307	Business Analytics I and Business Analytics II	
Core		
A A E 215	Introduction to Agricultural and Applied Economics ¹	4
or ECON 101	Principles of Microeconomics	
ECON 102	Principles of Macroeconomics	3-4
ECON 301	Intermediate Microeconomic Theory	4
or ECON 311	Intermediate Microeconomic Theory - Advanced Treatment	
ECON 302	Intermediate Macroeconomic Theory	4
or ECON 312	Intermediate Macroeconomic Theory - Advanced Treatment	
Concentrations within the Major		
Students must complete 15 credits of AAE courses 200-level or above. Students may choose to focus their studies on an area of concentration as follows: ²		15
Applied Economics		
Development Economics		
Environmental Economics		
Managerial Economics		
Capstone		
A A E 500	Senior Capstone Experience	3
Total Credits		41-45

¹ A A E 215 Introduction to Agricultural and Applied Economics satisfies QR-B credit.

² A A E 215 Introduction to Agricultural and Applied Economics, A A E 299 Independent Study and A A E 500 Senior Capstone Experience may not count toward the 15 credits required in the major.

CONCENTRATIONS WITHIN THE MAJOR APPLIED ECONOMICS

Code	Title	Credits
AAE courses, 200 level and above ¹		15
Total Credits		15

¹ AAE courses 200 level and above may not include A A E 215 Introduction to Agricultural and Applied Economics, A A E 299 Independent Study, or A A E 500 Senior Capstone Experience.

DEVELOPMENT ECONOMICS

Code	Title	Credits
Select any of the following courses:		
A A E 319	The International Agricultural Economy	3
A A E/AGRONOMY/ INTER-AG/ NUTR SCI 350	World Hunger and Malnutrition	3
A A E/INTL ST 373	Globalization, Poverty and Development	3
A A E/INTL ST 374	The Growth and Development of Nations in the Global Economy	3
A A E/ECON/ INTL BUS 462	Latin American Economic Development	3
A A E/ECON 473	Economic Growth and Development in Southeast Asia	3
A A E/ECON 474	Economic Problems of Developing Areas	3
A A E/ECON 477	Agricultural and Economic Development in Africa	3
AAE courses, 200 level and above ¹		

¹ AAE courses 200 level and above may not include A A E 215 Introduction to Agricultural and Applied Economics, A A E 299 Independent Study, or A A E 500 Senior Capstone Experience.

ENVIRONMENTAL ECONOMICS

Code	Title	Credits
Select any of the following courses:		
A A E/ENVIR ST 244	The Environment and the Global Economy	4
A A E 246	Climate Change Economics and Policy	3
A A E/ECON/ ENVIR ST 343	Environmental Economics	4
A A E 352	Global Health: Economics, Natural Systems, and Policy	4
A A E/ECON 371	Energy, Resources and Economics	3
A A E/ECON/ F&W ECOL 531	Natural Resource Economics	3
A A E/ECON/ ENVIR ST/ URB R PL 671	Energy Economics	3
AAE courses, 200 level and above ¹		

¹ AAE courses 200 level and above may not include A A E 215 Introduction to Agricultural and Applied Economics, A A E 299 Independent Study, or A A E 500 Senior Capstone Experience.

MANAGERIAL ECONOMICS

Code	Title	Credits
Select any of the following courses:		
A A E 320	Farming 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 335	Introduction to Data Analysis using Spreadsheets	2
A A E 419	Agricultural Finance	3
A A E/ECON 421	Economic Decision Analysis	4
AAE courses, 200 level and above ¹		

¹ AAE courses 200 level and above may not include A A E 215 Introduction to Agricultural and Applied Economics, A A E 299 Independent Study, or A A E 500 Senior Capstone Experience.

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.

LEARNING OUTCOMES

1. Use economic concepts to think critically about real-world problems and public policy debates.
2. Use appropriate quantitative techniques to analyze economic problems.
3. Communicate results effectively orally and in writing.

FOUR-YEAR PLAN

FOUR-YEAR PLAN

SAMPLE AGRICULTURAL & APPLIED ECONOMICS FOUR-YEAR PLAN

Freshman			
Fall	Credits	Spring	Credits
COMM A		3 MATH 211 or 221 ¹	5
MATH 112 or 114 ¹		3-5 A A E 215	4
First Year Seminar		1 Ethnic Studies	3
CALS Biological Science		3 Electives	3
Electives		3	
			13-15

Total Credits 28-30

Sophomore			
Fall	Credits	Spring	Credits
ECON 102		3 ECON 301	4
Statistics Course		3 AAE Courses	3
CALS Biological Science		3 Comm B	3
Electives		6 Electives	5
			15

Total Credits 30

Junior			
Fall	Credits	Spring	Credits
AAE Courses		3 AAE Courses	3
ECON 302		4 CALS International Studies	3
Gen Ed Requirement		3 CHEM 108 or 103	4-5
Electives		6 Electives	4
			16

Total Credits 30-31

Senior			
Fall	Credits	Spring	Credits
AAE Courses		3 AAE course	3
Humanities		3 A A E 500	3
Electives		9 Electives	9
			15

Total Credits 30

¹ Students must complete MATH 211 or MATH 217 or MATH 221. Students may satisfy the required level of math proficiency through the math placement exam. On the other hand, this level of competence may require as many as three semesters of coursework in mathematics.

ADVISING AND CAREERS

For more information or to declare a major in agricultural and applied economics, contact:

Linda Davis
 Department of Agricultural and Applied Economics
 424 Taylor Hall
 608-262-9488

linda.davis@wisc.edu

Schedule an appointment with me using Starfish (<https://wisc.starfishsolutions.com/starfish-ops/dl/instructor/serviceCatalog.html?bookmark=connection/10575/schedule>).

CAREERS

Students with a degree in agricultural and applied economics may specialize in international development, environmental policy, or managerial economics. They often find careers in policy analysis, environmental management, business analysis, trade or consulting. They can find employment with a variety of employers such as nonprofit organizations, government agencies, co-operatives, multinational firms, agribusiness companies, financial institutions, and the food or retailing industry. Many students pursue graduate degrees in economics, business, public policy, law or other areas.

Students can use the services provided by the CALS Career Services Office (<https://cals.wisc.edu/academics/undergraduate-students/career-services/>), which include help with creating a resume or cover letter and mock interviews. CALS students also have access to Handshake (<https://cals.wisc.edu/academics/undergraduate-students/career-services/handshake/>), an online job/internship posting tool that provides students with hundreds of job and internship listings.

PEOPLE

PROFESSORS

Barham, Bradford
 Chavas, Jean-Paul
 Coxhead, Ian
 Deller, Steven
 Fletcher, Jason*
 Foltz, Jeremy
 Mitchell, Paul
 Phaneuf, Daniel (Chair)
 Provencher, R. William
 Rutherford, Thomas
 Schechter, Laura
 Shi, Guanming
 Stiegert, Kyle

ASSOCIATE PROFESSORS

Du, Sheldon
 Grainger, Corbett
 Parker, Dominic

ASSISTANT PROFESSORS

Conroy, Tessa*
 Dower, Paul
 Johnston, Sarah
 Mukherjee, Priya
 Stevens, Andrew

FACULTY ASSOCIATES

Beach, Jeremy
 Berner, Courtney

Dong, Fengxia
 Stephenson, Mark*

LECTURER

Schmidt, Silke
 van Rijn, Jordan

UNDERGRADUATE ADVISOR

Davis, Linda

*AAE Affiliate Faculty

WISCONSIN EXPERIENCE

CAPSTONE

Students with a major in agricultural and applied economics (AAE) must all complete the senior capstone requirement. For our majors, the capstone is a specific class which offers students the opportunity to work in a group with other students in their area of interest to produce a final project and present it to their fellow students and AAE faculty. Students will have the opportunity to demonstrate how the concepts they have learned in their AAE classes are applied to real-world situations.

STUDY ABROAD

Many students with a major in agricultural and applied economics choose to study abroad. Study abroad programs offer students the opportunity to gain an international perspective and can prepare students to participate in today's global economy. International Academic Programs (IAP) (<https://www.studyabroad.wisc.edu/>) serves as the primary study abroad office on campus, offering over 200 programs in over 60 countries around the world. IAP program offerings, available to all majors, range from short-term, faculty-led opportunities to intensive language study, internships, a semester or a year at a university overseas, service learning, and programs with special themes. There are also international programs offered through the College of Agricultural and Life Sciences (CALS) (<https://cals.wisc.edu/academics/undergraduate-students/studyabroad/>). Study abroad programs in CALS cover a variety of content areas such as sustainable development, food systems, agriculture, health and wellness, and community and economic development.

RENK SCHOLARSHIP PROGRAM

Agricultural and applied economics majors are eligible to apply for the Renk Scholarship Program (<https://renk.aae.wisc.edu/renk-scholarship/>), which can provide scholarships for up to three years. The Renk Scholarship Program is part of the Renk Agribusiness Institute (<https://renk.aae.wisc.edu/>) and emphasizes leadership in contemporary agricultural issues and activities linked to agribusiness.

INDEPENDENT STUDY

Students in the agricultural and applied economics major may have the opportunity to work with an AAE faculty member on an independent study project. They will work with one of our faculty and engage in independent reading and research for credit. Students will have the opportunity to experience the excitement and frustrations of doing research, while learning techniques that might prove useful in future projects.

RESOURCES AND SCHOLARSHIPS

SCHOLARSHIPS

The Department of Agricultural and Applied Economics offers a number of scholarships to our majors. All AAE students are encouraged to apply each year for department and CALS scholarships through the Wisconsin Scholarship Hub (WiSH). AAE majors are also eligible to apply for the Renk Scholarship Program (<https://renk.aae.wisc.edu/renk-scholarship/>), which can provide scholarships for up to three years. The Renk Scholarship Program is part of the Renk Agribusiness Institute (<https://renk.aae.wisc.edu/>) and emphasizes leadership in contemporary agricultural issues and activities linked to agribusiness.