

Agricultural and Applied Economics

Agricultural and Applied Economics
Division of Applied Social Sciences
College of Agriculture, Food and Natural Resources
138A Mumford Hall
Columbia, MO 65211 USA
<https://dass.missouri.edu>

There is no undergraduate program in Agricultural and Applied Economics. There are MS and PhD programs in Agricultural and Applied Economics. The graduate program is recognized for its innovative approach to graduate training. Graduate students have the opportunity of working with leading scholars engaged in a diverse range of challenging research projects.

Faculty

Professor H. S. James**, W. Thompson**, C. B. Valdivia**, P. Westhoff**

Associate Professor M. K. Hendrickson**, K. L. Jacobs**, H. Qin**, T. Skevas**, M. E. Sykuta**

Assistant Teaching Professor M. Sveum*

Research Assistant Professor K. Clark, J. Binfield*, J. Grashuis

Instructor M. Foreman, J. Moreland

Professor Emeritus M. Bennett, C. Braschler, M. E. Bredahl, T. Brown, J. Dauve, B. J. Deaton, G. Devino, J. Findeis, G. A. Grimes, C. Headley, N. A. Hein, J. E. Ikerd, V. Jacobs, N. Kalaitzandonakes, M. S. Kaylen, T. Johnson, S. F. Matthews, W. H. Meyers, D. D. Osborn, R. Plain, A. A. Prato, V. J. Rhodes, K. Schneeberger, J. I. Stallman, D. L. VanDyne, P. F. Warnken, H. Williamson Jr., A. W. Womack

* Graduate Faculty Member - membership is required to teach graduate-level courses, chair master's thesis committees, and serve on doctoral examination and dissertation committees.

** Doctoral Faculty Member - membership is required to chair doctoral examination or dissertation committees. Graduate faculty membership is a prerequisite for Doctoral faculty membership.

Undergraduate

While MU does not offer an undergraduate degree specifically in agricultural and applied economics, the University does offer a bachelors degree in the closely related area of Agribusiness Management (<https://catalog.missouri.edu/collegeofagriculturefoodandnaturalresources/agribusinessmanagement/>), as well as other related areas both within the College of Agriculture, Food and Natural Resources, and in the other Schools and Colleges that make up the University. The catalog provides a complete list of these degree options (<https://catalog.missouri.edu/degreesanddegreeprograms/>).

Graduate

- MS in Agricultural and Applied Economics (<https://catalog.missouri.edu/collegeofagriculturefoodandnaturalresources/agriculturalappliedeconomics/ms-agricultural-applied-economics/>)

- PhD in Agricultural and Applied Economics (<https://catalog.missouri.edu/collegeofagriculturefoodandnaturalresources/agriculturalappliedeconomics/phd-agricultural-applied-economics/>)

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Director of Graduate Studies: Teo Skevas (skevast@missouri.edu)

The graduate program emphasizes preparation for teaching, research, and extension work in academia, as well as for careers in agrifood business, government and international agriculture. The MS program is 30 credit hours and offers thesis and non-thesis track options, including an accelerated MS program for undergraduate students at the University of Missouri completing a degree in agribusiness or other Bachelor's program. The PhD program usually requires about three years beyond the MS degree to complete. The size, quality and diversity of the faculty provide a broad choice of advisors and research topics. While students and their advisory committees have latitude in developing a plan of study, the following specialties are emphasized:

Environmental and Development Economics

In this area, students develop skills and knowledge to address some of society's most pressing problems. There are many linkages among development and environmental and natural resource policy issues, both in developed and developing economies. The importance of these linkages is evidenced by the emphasis on sustainable development in policy circles. Because institutions affect environmental outcomes, risk, and economic development, comparing institutions across differing contexts can provide useful insights for policy. Behavioral economics is an emerging research area that can be applied productively to environmental and development issues. Students apply theory from economics and other social sciences, use rigorous analytical tools for translational research to analyze real-world problems and policies that can address them.

Managerial, Behavioral & Organizational Economics

This area provides a coherent area of study for preparing students for academic careers in applied economics, management, and related fields, as well as for careers in government and industry. The program is based upon a set of courses in microeconomic theory, neo-institutional economics, behavioral economics, and organizational economics. These core courses are augmented by courses in qualitative and quantitative methods and a cognate area that supports the student's research.

Public Policy Analysis

This area seeks knowledge about how agricultural and food policy influence markets and, ultimately, human well-being. The program relies on a rigorous approach to agricultural economics that underpins applied analysis. This area is affiliated with widely recognized centers for agricultural economics, such as the Food and Agricultural Policy Research Institute (FAPRI) (<https://www.fapri.missouri.edu/>), Agricultural Markets and Policy (AMAP), and the Rural and Farm Finance Center (RaFF) (<https://ruralandfarmfinance.com/>).

Admissions Requirements

Minimum requirements for admission into the MS or PhD program are a Bachelor's degree (BA or BS) or equivalent and undergraduate GPA 3.0. The Test of English as a Foreign Language (<http://www.ets.org/>)

toefl/) (TOEFL) or an equivalent English competency test is required of applicants whose first language is not English, with a minimum TOEFL score of 80 if internet-based. Applicants who obtained an undergraduate or graduate degree from the U.S. or Canada are usually waived from taking the TOEFL. To report your TOEFL score, use MU's code of 6875.

Course prerequisites are (1) two courses in economics, agricultural economics or equivalent, (2) a course in differential calculus, and (3) a statistics course. Students applying to the PhD program with a master's degree should also have courses in (1) Intermediate microeconomics, (2) Intermediate macroeconomics, and (3) Econometrics or regression and correlation analysis. If you have not met these prerequisites or have limited background in economics, you may be required to correct these deficiencies or take certain courses without graduate credit before being formally admitted into the program. Applicants should also take the Graduate Record Examination (<http://www.ets.org/gre/>) (GRE) or GMAT (<https://www.mba.com/exams/gmat/>) exams (successful applicants typically score 160 or above on the quantitative component and 3.5 or above on the writing component). To report your GRE scores, use MU's code of 6875.

Application Process

The following should be submitted as part of the application process:

- Statement of purpose explaining why you want to study at the University of Missouri
- Three letters of recommendation
- Official transcripts
- GRE (or GMAT) score report
- TOEFL (or equivalent) score report, if applicable

Apply online through the University of Missouri Graduate School:

- Online University of Missouri graduate studies application (<https://gradschool.missouri.edu/admissions/apply/>)

Application Deadlines

For priority consideration for assistantships, fellowships and scholarships, applications should be submitted by **Jan. 15** for Fall enrollment and **Sept. 1** for Spring enrollment.

Financial Assistance

Requests for financial assistance should be made at the time students apply for admittance into the program.

AAE 7223: Professional Solution Selling

(cross-leveled with ABM 4223). This course will reinforce the sales education students gained in ABM 2223, Agricultural Sales. Class will focus on strategic and conceptual selling which are techniques geared toward complex B2B sales. In this course, we will discuss myriad career opportunities in the sales profession. Students will have the opportunity to interact with sales professionals.

Credit Hours: 3

Prerequisites: ABM 2223

AAE 7240: Microeconomics Theory and Applications

(cross-leveled with ABM 4240). This course extends the learning from principles of microeconomics for students of applied economics. The topics in this course prepare students for further study in finance,

business management, policy analysis, economic development, and other applications of economic theory. The course stresses development of theoretical models of consumer choice, firm behavior, perfect and imperfect markets, and externalities, balanced by investigation of the assumptions behind these models. Applications of the models to management and policy issues will be assigned throughout the semester.

Credit Hours: 3

Prerequisites: MATH 1400 and ABM 1041 or ECONOM 1014

AAE 7251: Agricultural Prices

(cross-leveled with ABM 4251). Agricultural Prices is a key class for understanding how market prices are determined and what changes them. Students use economics, math, and statistical tools throughout the course. The content of this course can be relevant to students who intend to work for firms or in a policy environment, or for further education in economics or business.

Credit Hours: 3

Prerequisites: ABM 1041 or ECONOM 1014, ABM 2225 and MATH 1400

AAE 7286: Behavioral and Experimental Economics

(cross-leveled with ABM 4286). This course provides an introduction to behavioral economics and experimental methods. Behavioral and experimental economics are exciting fields in the broader economics discipline, with experimental economics focusing on controlled identification and behavioral economics research tackling situations in which the observed behavior of economic agents deviates from the predictions of standard economic theory. The course introduces state-of-the-art research methodology in experimental and behavioral economics, and provides tools that can be applied to a variety of economic situations, including social dilemmas, auction markets, and individual decision-making.

Credit Hours: 3

Prerequisites: ABM 4240 or ECONOM 4351, or instructor's permission. Game theory is helpful but not required

AAE 7295: Agricultural Risk Management

(cross-leveled with ABM 4295). This class will examine the range of risks businesses face and explore ways of characterizing and evaluating those risks.

Credit Hours: 3

Prerequisites: ABM 3183 and ABM 2225 or STAT 2500

AAE 7301: Topics in Agricultural and Applied Economics

Current and new topics not currently offered in applied and/or theoretical areas in Agricultural and Applied Economics.

Credit Hour: 1-6

AAE 7360: Energy Markets and Regulation

(cross-leveled with ABM 4360). Energy markets are a primary driver of economic development and economic growth. This course introduces students to the economics, regulatory structures, and policies governing energy markets broadly, with some emphasis on electricity and natural gas markets. At the end of the course, students should be able to understand the nature of and be able to identify the myriad levels and types of energy markets and regulatory bodies that oversee those markets; explain the underlying economics of energy markets; describe the regulatory processes involved in planning, developing and pricing utility infrastructure and services; be familiar with technological changes in and the implications for energy markets; and critically apply these understandings to analyzing issues facing energy markets.

Credit Hours: 3

Recommended: AAE 7240 or ECONOM 7351

AAE 7370: Society, Environment and Natural Resources

(same as SOCIOL 7370, NAT_R 7370; cross-leveled with SOCIOL 4370, NAT_R 4370, ABM 4370). An interdisciplinary examination of environmental and natural resource issues focusing on social, cultural, and policy dimensions. Diverse perspectives on human-nature interactions in domestic and international settings are included.

Credit Hours: 3

AAE 7400: Environmental Law, Policy, and Justice

(same as ENV_SC 7400; cross-leveled with ENV_SC 4400). This course will examine the intersection of environmental law, policy, and justice. We will first cover the building blocks of U.S. environmental law, including common law and statutes such as the Clean Air Act and the Clean Water Act. We will then turn to international environmental policy issues such as climate change, marine pollution, and the hazardous waste trade. We will approach these laws and treaties through the lens of equity and environmental justice. The course will use a variety of teaching methods, including lecture and classroom discussion using cold calling and the Socratic Method. We will also have student presentations, guest speakers, a moot court, a negotiation simulation, and a field trip in the Columbia, Missouri area. Graded on A-F basis only.

Credit Hours: 3

AAE 7940: Internship Experiences in Agricultural and Applied Economics

Combines study, observation, and employment in a public agency or private firm in marketing, farm management, or credit. Staff supervision and evaluation. Reports required. Graded on S/U basis only.

Credit Hour: 1-3

Prerequisites: 2.5 GPA; 75 hours of course work and instructor's consent

AAE 7962: Planning the Farm Business

(cross-leveled with ABM 4962). Economic analysis and planning of the farm business and its organization. Applications of computerized management techniques to farm business including resource acquisition, tax management, enterprise analysis, and business analysis through farm records and budgets.

Credit Hours: 3

Prerequisites: ABM 3260

AAE 7971: Agribusiness Management Strategy

(cross-leveled with ABM 4971). Analysis of industry forces in agriculture and food sector. Assessing risks and firms capabilities. Development of firm's competitive strategy, including vertical integration, diversification, international business option, and financial planning and performance measurement.

Credit Hours: 3

Prerequisites: ABM 3282 or FINANC 3000 and ABM 3286 or MANGMT 3000

AAE 7972: Agri-Food Business and Cooperative Management

(cross-leveled with ABM 4972). Risk management in the global agrifood chain, including managing the unique uncertainties of biological production processes, global market analysis, and government intervention, of risk management tools and institutions unique to strategic decision making in agribusiness and cooperative firms.

Credit Hours: 3

Prerequisites: ABM 4971 and ABM 3286 or MANGMT 3000

Recommended: ABM 3256

AAE 7983: Strategic Entrepreneurship in Agri-Food

(cross-leveled with ABM 4983). Strategic entrepreneurship is the search for opportunities to generate income streams from innovation, development of new markets, and altering the rivalry positions in existing markets. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: Graduate standing and one course at the level of intermediate microeconomics

AAE 7990: Economic Analysis of Policy and Regulation

(cross-leveled with ABM 4990). Apply economic concepts and tools to analyze the policy-making process and the implications of policy for individuals, firms, markets and society. Policy topics include, among other things, agricultural support programs, environmental policy, international trade, international development, and agribusiness regulation.

Credit Hours: 3

Prerequisites: ABM 2225 or STAT 2500 and ABM 4240 or ECONOM 4351

AAE 7995: Economics of Agricultural Production and Distribution (cross-leveled with ABM 4995). Applies economic principles to agricultural production including price theory, linear programming and uncertainty.

Credit Hours: 3

Prerequisites: ECONOM 3251 and ABM 2225 or STAT 2500

AAE 8001: Advanced Topics in Agricultural and Applied Economics
Analyzes economic logic problems. Current agricultural and applied economic problems.

Credit Hours: 3

AAE 8050: Economics of Institutions and Organizations

This course expands upon the fundamental principles of neo-classical economics by relaxing traditional behavioral and informational assumptions and by introducing the importance of transaction costs and institutions for economic analysis.

Credit Hours: 3

AAE 8060: Efficiency and Productivity Analysis

Applies economic theory and quantitative methods to analyze the performance of Decision-Making Units (e.g. firms, industries, regions, countries, etc.). Students will apply the quantitative tools learned throughout the course in a real empirical setting.

Credit Hours: 3

Prerequisites: ECONOM 7351 and ECONOM 7371 or equivalent

AAE 8085: Masters Problems in Agricultural and Applied Economics
Supervised study, research in specialized phases of agricultural and applied economics.

Credit Hour: 1-99

AAE 8090: Masters Thesis Research in Agricultural and Applied Economics

Independent investigation of advanced nature, leading to dissertation. Graded on a S/U basis only.

Credit Hour: 1-6

AAE 8265: Agricultural and Food Policy

The course is designed to help students understand how agricultural and food policies are developed and how they can affect farmers, consumers, taxpayers and the environment. Topics include the policy process, farm subsidy programs, crop insurance, nutrition programs, trade agreements, food security, biofuel policies, promotion of organic and local foods and food safety. The primary focus will be U.S. policies, but policies in other countries will also be discussed. Students will develop analytical skills that will prepare them for careers in government, business or academia. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: ECONOM 7351 or equivalent

Recommended: AAE 9220, AAE 9230

AAE 8287: Seminar on Sustainable Development

(same as SOCIOL 8287, NAT_R 8287). An interdisciplinary examination of sustainable development focusing on social, economic, cultural and environmental dimensions of development. Theoretical and methodological approaches to sustainable development (systematic review and meta-analysis) as well as international and domestic issues are included. Graded on A-F basis only.

Credit Hours: 3

AAE 8350: Regional Development Issues and Analysis

(same as PUB_AF 8350). Examines theories of regional growth and development and methods for analysis with applications to current policy issues. Topics include firm location, new economic geography and agglomeration theory, clusters, human capital, migration, social capital, tax and development incentives, and sustainable regional development.

Credit Hours: 3

Prerequisites: ECONOM 7351 or PUB_AF 8190 or equivalent

AAE 8410: Natural Resource and Environmental Economics

Contemporary natural resource/environmental problems; natural resource capacity, alternative economic theories, property rights, externalities, market failures, efficient use of exhaustible and renewable resources, and economics of environmental pollution.

Credit Hours: 3

Prerequisites: ECONOM 7351

AAE 8430: International Agricultural Development Policy

An analytical review of economic policies directed toward stimulating agricultural development in the world's low income countries.

Credit Hours: 3

Prerequisites: ECONOM 7351 and ECONOM 7353

AAE 8436: Community, Natural Resources and Sustainability

A graduate seminar on conceptual and methodological (mixed methods) approaches to natural resource sustainability issues at the human community level. Focuses on theoretical, methodological, and empirical topics related to the interactions between community, natural resources and sustainability. Graded on A-F basis only.

Credit Hours: 3

AAE 8444: Agriculture, Food and Community

Introduces key debates in the sociology of food and agriculture. Includes research on the structure and history of the agriculture system and its impacts on farmers, communities and the natural environment.

Credit Hours: 3

AAE 8450: Masters Non Thesis Research

Independent investigation of advanced nature. Report required.

Credit Hour: 1-6

AAE 8510: Interdisciplinary Quantitative and Mixed Research Methods

(same as NAT_R 8510). This course will give students a foundational understanding of quantitative and mixed research methodology in agricultural, environmental, natural resource, and sustainability social sciences. The main objective is to help students identify and formulate their own research questions and develop and implement a process for answering them. Graded on A-F basis only.

Credit Hours: 3

AAE 8520: Economics of Transaction and Contracting

This course focuses on the economic incentives underlying transaction relationships and develops and implements a framework for analyzing contract documents governing various kinds of transactions.

Credit Hours: 3

AAE 8610: Economic and Sociological Approaches to Collective Action

This course identifies analytical and methodological tools, including rational choice and social capital, to deal with practical problems of collective action in: agricultural cooperatives, rural community development, political interest groups and other mutuals.

Credit Hours: 3

Prerequisites: AAE 7972

AAE 8860: International Comparative Rural Policy

(same as PUB_AF 8860, NAT_R 8860). Compares the rural policy objectives and implementation strategies of various countries, and assesses these policies in terms of economic, social, environmental outcomes and their implications for international relations. Includes 2-weeks of study Abroad. May be repeated for credit. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: instructor's consent

AAE 9001: Advanced Topics in Economics II

Analyzes economic logic problems. Current agricultural economic problems.

Credit Hours: 3

AAE 9040: Advanced Microeconomics Theory and Applications I

First semester course that rigorously examines the microeconomic theory of producer and consumer behavior, combined with applications of the theoretical concepts to empirical economic research on agricultural, business, development, and environmental issues. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: ECONOM 7351 or instructors consent

AAE 9042: Advanced Microeconomics Theory and Applications II

Second semester advanced micro theory covering choice under uncertainty, industry structure, game theory, information econ, and political economy of regulation. Includes applications of micro models to issues in agricultural, natural resource, and development sectors.

Credit Hours: 3

Prerequisites: AAE 9040

AAE 9085: Doctoral Problems in Agricultural and Applied Economics

Supervised study, research in specialized phases of agricultural and applied economics.

Credit Hour: 1-99

Prerequisites: instructor's consent

AAE 9090: Doctoral Dissertation Research in Agricultural and Applied Economics

Independent investigation of advanced nature, leading to dissertation. Graded on a S/U basis only.

Credit Hour: 1-99

AAE 9220: Price and Market Analysis

Applies economic theory and quantitative methods to analyze agricultural prices and markets. Examines problem formulation, estimation, and model evaluation applied to the concepts of demand, supply, and prices.

Credit Hours: 3

Prerequisites: ECONOM 8451 or ECONOM 8472; STAT 4510

AAE 9230: Welfare and Consumption Economics

Introduces welfare economic principles; application to problems of resource allocation. Appraises economic policies, programs; consumers' choice; measurement of consumption; living standards; household decisions and markets relation.

Credit Hours: 3

Prerequisites: ECONOM 8451 or instructor's consent

AAE 9265: Food, Agricultural and Rural Policy

Application of welfare economics theory to food, agricultural and rural development policy analysis. Historical perspective and economics analysis of contemporary issues in national and international policy and institutions.

Credit Hours: 3

Prerequisites: ECONOM 7351 and AAE 9230

AAE 9510: Organizational Economics I

This course builds on transaction cost-based theories and tools to study the economic underpinnings of intra-firm organization, firm boundaries, and the structure of inter-firm transactions.

Credit Hours: 3

Prerequisites: AAE 8050

AAE 9520: Organizational Economics II

Relationships of neoclassical and new institutional economics to designing organizational strategy and structure. Internal coordination and structure, organizational boundaries, inter-firm rivalry and cooperation, and competitiveness of food system organizations.

Credit Hours: 3

Prerequisites: AAE 8050
