

## Agribusiness Economics

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### COLLEGE OF AGRICULTURAL SCIENCES

#### Graduate Faculty:

**Altman, Ira J.**, Associate Professor and *Department Chair*, Ph.D., University of Missouri, 2005; 2006.

**Asirvatham, Jebaraj**, Assistant Professor, Ph.D., University of Illinois, 2011; 2015.

**Beaulieu, Jeffrey R.**, Associate Professor, *Emeritus*, Ph.D., Iowa State University, 1984; 1983.

**Beck, Roger J.**, Professor, *Emeritus*, Ph.D., Pennsylvania State University, 1977; 1984.

**Eberle, Phillip R.**, Associate Professor, *Emeritus*, Ph.D., Iowa State University, 1983; 1983.

**Harris, Kim S.**, Associate Professor, *Emeritus*, Ph.D., University of Illinois, 1985; 1984.

**Herr, William M.**, Professor, *Emeritus*, Ph.D., Cornell University, 1954; 1957.

**Kraft, Steven E.**, Professor, *Emeritus*, Ph.D., Cornell University, 1976; 1980.

**Moon, Wanki**, Professor, Ph.D., University of Florida, 1995; 2000.

**Rendleman, C. Matthew**, Associate Professor, Ph.D., Purdue University, 1989; 1994.

**Sanders, Dwight R.**, Professor, Ph.D., University of Illinois, 1999; 2000.

The Department of Agribusiness Economics (ABE) offers graduate work leading to the Master of Science degree with a major in agribusiness economics. A program of concurrent study leading to the award of two master's degrees, the Master of Business Administration and Master of Science with a major in agribusiness economics can be undertaken. An interdisciplinary degree at the Master of Science level may be achieved by completing requirements as a double degree major.

Graduate students with a minimal undergraduate grade point average of 2.7 (4.0 scale) and demonstrated competence in economics, statistics, mathematics, and agricultural economics are admitted unconditionally to the ABE Master of Science degree programs. Students with insufficient background may be admitted contingent upon demonstration of satisfactory completion of undergraduate courses in deficient areas.

This program requires a nonrefundable \$65 application fee that must be submitted with the application for Admissions to Graduate Study in Agribusiness Economics. Applicants must pay this fee by credit card. Inquiries should be directed to the chair of the Department of Agribusiness Economics, Ag Building, Room 226, Mail Code 4410, 1205 Lincoln Drive, Southern Illinois University Carbondale, Carbondale, IL 62901-4410.

#### Agribusiness Economics Concentration

Through selected coursework and research students may specialize in resource and environmental economics, economic and rural development, agribusiness management and finance, agricultural marketing and prices, farm production management, and international trade and agricultural policy.

The Master of Science degree major in agribusiness economics

with a concentration in agribusiness economics is awarded upon completion of required coursework with a minimum graduate grade point average of 3.0 (4.0 scale) in either of two options; a thesis or a non-thesis (research paper) option. For both options at least 15 hours must be at the 500 level.

The thesis option requires satisfactory completion of 30 hours of graduate credit. This includes nine hours in structured agribusiness economics courses; ABE 500, ABE 571, and ABE 572. 15 hours of elective graduate credit are selected based upon recommendation from the agribusiness faculty member directing the student's thesis work. A research component including six hours of ABE 599 and an oral examination is required. This option is preferred for individuals with Ph.D. aspirations at SIUC or other institutions.

The non-thesis option requires satisfactory completion of 30 hours of graduate credit. This includes nine hours in structured agribusiness economics courses; ABE 500, ABE 571, and ABE 572. 21 hours of elective graduate credit are selected based upon recommendation from the agribusiness faculty member acting as the student's research paper advisor. Six of these hours must be at the 500 level, including a research component of three hours of ABE 593 and an oral presentation of the student's research paper. This option is preferred for individuals seeking a career in the public sector or with private industry. With proper course selection and timely research component development a student could complete the non-thesis option in one year's time.

#### Agricultural Services Concentration

The agricultural services concentration is designed to permit individuals who are professionals in private industry or public service to earn a Master of Science degree with a major in agribusiness economics while remaining fully employed in the agricultural sector.

Other individuals may be admitted after request and consideration by the ABE graduate committee and approval of the graduate director.

The agricultural services concentration requires satisfactory completion of thirty hours of graduate credit. 15 hours must be at the 500 level and 15 hours must be in Agribusiness Economics or related disciplines, of which three hours must be ABE 593 where a student initiated research paper or special project will be completed under the direction of a faculty advisor.

#### Accelerated (4 year +1) joint BS - MS Degree

The "4 year +1" program allows motivated and high achieving students to complete a program leading to an undergraduate Bachelor of Science degree and a Master of Science degree with a major in Agribusiness Economics in five years. As early as sophomore year, junior year for transfer students, a student working with a faculty advisor will develop a program of study consistent with the student's interest and goals. To complete this five year plan 141 credit hours is required. Nine credit hours are double counted toward an undergraduate and a Master's degree. 21 hours are taken after undergraduate graduation.

The option requires satisfactory completion of nine hours in structured agribusiness economics courses: ABE 500, ABE 571 (or 471 if taken at the undergraduate level), and ABE 572 (or 472). 21 hours of elective graduate credit, which may include ABE credit hours at the 400-level taken as an undergraduate,

are selected based upon recommendation of a faculty advisor. Six of these hours must be at the 500-level. As with the traditional ABE Master's program, ABE 593, Individual Research, is required as students complete a research project during the fifth year of study. It is expected that working with a faculty advisor the student will begin development of the research project during the undergraduate senior year. A service component, ABE 591, taken during the fifth year, entails working in an unpaid research assistantship capacity, or upon petition to the graduate director, an unpaid research assistant.

This option is preferred for individuals that recognize the value in an advanced degree as the degree may lead to higher entry positions in their chosen career path, more responsibilities, and greater life-long earning potential. An associate benefit of the "4 year +1" program to students that have advanced degree aspirations is the ability to save money by completing their studies quicker.

### **M.B.A./M.S. in Agribusiness Economics Concurrent Degree Program**

The Department of Agribusiness Economics (ABE) and the College of Business together offer an M.B.A./ABE M.S., a concurrent degree program leading to both the Master of Business Administration and the Master of Science with a major in agribusiness economics. The separate M.B.A. degree requires completion of 32 semester hours of coursework; the M.S. with a major in ABE requires the completion of 30 semester hours (thesis option) or 30 hours (non-thesis option). In the concurrent M.B.A./M.S. degree program, the College of Business accepts six semester hours of ABE approved coursework, and ABE accepts six semester hours of College of Business approved coursework. The end result is that the concurrent degree requires completion of 26 semester hours of College of Business approved courses and 24 semester hours of ABE approved courses (thesis option) or 30 semester hours of ABE approved courses including a minimum of six semester hours of ABE courses at the 400 level (non-thesis option), or a decrease of 12 semester hours from pursuing both degrees separately.

The ABE M.S. as a part of this option requires satisfactory completion of ABE 500, ABE 571, ABE 572 and additional elective hours. A research component of a thesis (thesis option) or research paper (non-thesis option) as specified for the Agribusiness Economics Concentration must be completed for award of the ABE M.S. degree.

Students interested in enrolling in the concurrent M.B.A./ABE M.S. degree program must apply to and be accepted by both the graduate programs in the ABE Department and the College of Business. The student then may request permission to pursue the concurrent degree. Students enrolled in either the M.B.A. or ABE M.S. may subsequently seek permission to pursue the concurrent degree. Admission to the concurrent degree must be completed at least one semester before the last semester of registration at SIU. The student must complete the requirements of the concurrent degree program to receive both the M.B.A. and ABE M.S. If the student elects, after acceptance into the concurrent degree program, to pursue either, but not both, the M.B.A. or ABE M.S., all requirements of the individual degree program must be satisfied.

### **Courses (ABE)**

Field trips are required for certain courses.

**ABE 401-3 Agricultural Law.** Relations of common-law principles and statutory law to land tenure, farm tenancy, farm labor, farm management, taxation, and other problems involving agriculture. Restricted to junior standing or consent of instructor.

**ABE 402-1 to 6 Problems in Agribusiness Economics.** Designed to improve the techniques of agribusiness economics workers through discussion, assignment, and special workshops on problems related to their field. Emphasis will be placed on new innovative and currently developed techniques for the field. Special approval needed from the chair.

**ABE 405-3 Management of Ethanol Production Facilities.** This course is offered in cooperation with the National Corn-to-Ethanol Laboratory and provides a comprehensive introduction to the management and operation of an ethanol facility as well as overview of today's biofuels industry. Topics include: ethanol industry trends and bio-fuels future, corn-to-ethanol production processes, operations control and management, products and co-products, and environmental topics.

**ABE 419-3 Entrepreneurship in Agribusiness.** Students will understand the importance of entrepreneurs to the food, agriculture, and rural economies; learn characteristics common to successful entrepreneurs; prepare a business plan; use information resources to support a business plan; and become proficient in developing professional reports using information technology software. Prerequisite: ABE 350 or 351 or 360.

**ABE 440-3 Natural and Environmental Resource Economics and Policy.** Students will study the application of socioeconomic principles to problems related to natural and environmental resources. The course covers the policy context within which policies related to natural and environmental resources are developed and implemented as well as the range of policy tools available for addressing environmental/natural resource problems. The institutional setting for dealing with natural and environmental resources is presented along with the role of property rights and entitlements. Contemporary resource problems are used as examples. Prerequisite: six hours of agribusiness economics, economics, or geography; graduate status; or consent of instructor.

**ABE 442-3 Energy Economics and Policy.** Economics principles and methods are used to examine economic and policy issues relevant to energy production and use. Topics include: key aspects of energy supply, demand, markets, and regulation; environmental externalities of fuel production and use; the relationships among energy use, economic growth and the environment; alternative energy sources. Prerequisite: 6 hours of agribusiness or general economics, geography, or consent of instructor.

**ABE 444-3 Agricultural Development.** (Same as ABE 544) Students are introduced to economic growth and development theory at an intermediate level. Topics include trends in development in North America and study of theories. The economic theories covered address how growth occurs in developed economies including classical and neoclassical, central place and endogenous growth theories among others. Prerequisite: 6 hours of agribusiness or general economics, geography, or consent of instructor.

**ABE 445-3 Methods of Regional Economic Analysis.** (Same as ABE 545) Students are introduced to regional economic methods at an intermediate level. Students will learn concepts and tools commonly used in regional and community economic analysis. Students will learn to use regional input-output analysis and more technical regional economic models designed to capture spatial economic variables. Prerequisites: ABE 444 or consent of instructor.

**ABE 450-3 Advanced Farm Management.** Application of production economic principles and modern decision-making techniques to farm management problems. The importance of information, sources of agricultural risk and management of risk in farm planning will be integrated. Prerequisite: ABE 350 or equivalent and University Core Curriculum mathematics required.

**ABE 451-3 Appraisal of Rural Property.** Principles and practices of rural and farm appraisal. Applications of sales comparison, income capitalization and cost approaches for estimating market value. Consequences of environmental liabilities and regulations on appraisal practices. Understanding of special valuation methods for buildings, insurance, assessments, loans and condemnations. Prerequisite: ABE 350 or consent of instructor. Field trips not to exceed \$10.

**ABE 452-Advanced Agricultural Financial Management.** Focus is on using the financial accounting system recommended by the Farm Financial Standards Council as a base for evaluating the financial performance of farms and agribusinesses. Ratio analysis and DuPont modeling emphasized. Additional focus on credit markets serving farms and agribusinesses with an emphasis on the Farm Credit System and its affiliated Agricultural Credit Associations. Prerequisite: ABE 351.

**ABE 453-3 Agribusiness Planning Techniques.** Application of mathematical programming to agribusiness and farm planning, including enterprise selection, resource allocation, least cost ration formulation, decision making under risk and uncertainty, transportation and location problems. Emphasis placed on modeling problems and interpretation of results. Restricted to junior standing or consent of instructor.

**ABE 460-3 Agricultural Price Analysis and Forecasting.** The focus is on the measurement and interpretation of factors affecting agricultural prices. Methods to analyze the seasonal, cyclical, and trend components of commodity prices are presented. Formal forecasting techniques, including an introduction to statistical and regression methods, are used and explained. Emphasis is placed on the presentation, communication, and evaluation of forecasts in a business environment. Students are given an opportunity to perform applied price analysis and present the results. Prerequisite: ABE 318, 362 or equivalent.

**ABE 461-3 Agriculture Business Management.** Examination of agribusiness firm management with emphasis on the management and control of financial resources and the interrelationship between the agribusiness firm and human resource management. Other topics in agribusiness will include effective communication in the management process, business ethics, and workable credit programs for customers. Prerequisite: ABE 351 and 360 or equivalent.

**ABE 462-3 Advanced Agricultural Marketing.** Advanced treatment of marketing issues from both theoretical and practical decision-making perspectives. Marketing margins,

intertemporal, and spatial price relationships are reviewed in detail. Historical and current grain and livestock price series are utilized in decision-making exercises. Prerequisite: ABE 362 or equivalent.

**ABE 463-3 Managerial Strategies for Agribusiness.** Application of Industrial Organization and Strategic Management (Competitive Strategy) principles to address economic and managerial issues related to agriculture and food industries. Particular emphasis on applying those principles to explain structural changes taking place in the agriculture and food supply chain in the United States. Prerequisite: ABE 204, 350 or 360, ECON 240.

**ABE 471-3 Resource Allocation in the Agribusiness Firm.** An examination of resource allocation in the agribusiness firm. Production decisions, agricultural product price analysis and decision making models are considered. Student cannot receive credit for ABE 471 if credit has been received for ABE 571. Prerequisite: six hours of agricultural economics or economics. Special approval needed from the instructor.

**ABE 472-3 Problems and Policies of the Agricultural Sector.** An analytical survey of agricultural policy issues including agricultural price and income stabilization; international trade, capital and credit, the structure of agriculture and the quality of life in rural areas. Student cannot receive credit for ABE 472 if credit has been received for ABE 572. Prerequisite: six hours of agricultural economics or economics or instructor approval.

**ABE 500-3 Agribusiness Economics Research Methodology.** Research methodology as used in agriculture, including research problem definition, hypothesis formation, research design specification and development of research proposals. Both survey methodology and applied techniques, i.e. multiple regression and time series models, for developing and evaluating agricultural economic models are investigated.

**ABE 502-3 Environmental Decision Making.** (Same as ERP 502) The objective of the course is twofold. The first part of the class will be devoted to case studies of environmental decision making which use a variety of approaches to environmental policy. Topics to be covered include market-based environmental management versus regulatory approaches, climate change, conservation and floodplain management policy. The second part of the class will focus on the challenges of interdisciplinary communication and collaboration, methodological research issues and the role of integrated modeling. We will consider different issues such as qualitative and quantitative evidence, validation, and the role of values and objectivity in the scientific process.

**ABE 544-3 Agricultural Development.** (Same as ABE 444) Students are introduced to economic growth and development theory at an intermediate level. Topics include trends in development in North America and study of theories. The economic theories covered address how growth occurs in developed economies including classical and neoclassical, central place and endogenous growth theories among others. Prerequisites: 6 hours of agribusiness or general economics, geography, or consent of instructor.

**ABE 545-3 Methods of Regional Economic Analysis.** (Same as ABE 445) Students are introduced to regional economic methods at an intermediate level. Students will learn concepts and tools commonly used in regional and community economic analysis. Students will learn to use regional input-output analysis and

more technical regional economic models designed to capture spatial economic variables. Prerequisite: ABE 444 or consent of instructor.

**ABE 571-3 Resource Allocation in the Agribusiness Firm.** An examination of resource allocation in the agribusiness firm. Production decisions, agricultural product price analysis and decision making models are considered. Student cannot receive credit for ABE 571 if credit has been received for ABE 471. Prerequisite: six hours of agricultural economics or economics. Special approval needed from the instructor.

**ABE 572-3 Problems and Policies of the Agricultural Sector.** An analytical survey of agricultural policy issues including agricultural price and income stabilization; international trade, capital and credit, the structure of agriculture and the quality of life in rural areas. Student cannot receive credit for ABE 572 if credit has been received for ABE 472. Prerequisite: six hours of agricultural economics or economics. Special approval needed from the instructor.

**ABE 581-1 to 4 Seminar in Agribusiness Economics.** Seminar on current research and issues in agribusiness economics on topics such as farm management, farm policy, agricultural marketing, farm finance, agricultural prices and international agriculture.

**ABE 585-1 to 6 Practicum/Internship.** Supervised work experience at the graduate level with a public or private agency or firm through which a graduate student can acquire practical professional training to complement their academic course work and research.

**ABE 588-1 to 8 International Graduate Studies.** University residential graduate study program abroad. Prior approval by the department is required both for the nature of program and the number of semester hours of credit.

**ABE 590-1 to 4 Readings.** Readings in specialized topics under the direction of an approved graduate faculty member. Graded S/U only.

**ABE 591-3 Experiential Learning.** A research/teaching experiential learning course designed to allow the student to gain practical research development, classroom management and/or mentoring experience under the guidance of an assigned faculty member. A typical experience may include such activities as assisting a faculty member with class project design and management, assisting in research proposal development, or participating as a mentor in the College of Agricultural Sciences 121 (Ideas to Investigation) initiative.

**ABE 593-1 to 4 Individual Research.** Directed research in selected topics under the supervision of an approved graduate faculty member. Graded S/U only.

**ABE 599-1 to 6 Thesis.** Work in the research for and presentation of a thesis under the supervision of an approved faculty member. Graded S/U only.

**ABE 601-1 (per semester) Continuing Enrollment.** For those graduate students who have not finished their degree programs and who are in the process of working on their dissertation, thesis, or research paper. The student must have completed a minimum of 24 hours of dissertation research, or the minimum thesis, or research hours before being eligible to register for this course. Concurrent enrollment in any other course is not permitted. Graded S/U or DEF only.