

Economics

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Degrees offered: Bachelor of Science (BS) in Agribusiness; Bachelor of Arts (BA) in International Agribusiness; BS in Agricultural Economics; Master of Science (MS) in Applied Economics; BS, BA, MS, Master of Arts (MA), and Doctor of Philosophy (PhD) in Economics; participates in Master of Business Administration (MBA); participates in International MBA in Food and Agribusiness (offered through the Royal Agricultural College in Cirencester, England). The Agribusiness and Economics majors are structured to facilitate a dual major with companion majors within or outside the College of Business.

Undergraduate emphases: *BS in Agribusiness*—Business, Agricultural Systems; *BS, BA in Economics*—Economic Theory, Managerial Economics, Prelaw Economics

Graduate specializations: *MS in Applied Economics*—Agricultural Economics, Natural Resource Economics, and Regional Economic Development

The Department of Economics is jointly administered by the College of Agriculture and the College of Business. Programs in both the College of Agriculture and the College of Business are offered.

Undergraduate Programs

Objectives

Undergraduate economics provides students with the basic intellectual framework to understand and analyze economic problems and to make informed decisions. A basic understanding of economics is essential to becoming a well-informed citizen, as well as a successful business or public leader.

Admission Requirements

Freshmen who meet the admission requirements and are accepted in good standing by the University are eligible for admission to the College of Agriculture, the College of Business, and the Department of Economics. All transfer students, whether transferring from within Utah State University or from other col-

leges and universities, must have an overall minimum GPA of 2.2 to be accepted as majors in the department. Additional requirements may apply for students who seek to be admitted to a dual major.

New students wishing to major in the Department of Economics may do so by listing one of the departmental majors on their application when they apply for admission to USU. Students enrolled at USU may change to a departmental major by applying directly to the College of Agriculture, the College of Business, or the Department of Economics.

Graduation Requirements

To receive a bachelor's degree in Agribusiness, Agricultural Economics, Economics, or International Agribusiness, students must complete all University requirements and the college and departmental requirements for their specific major as noted below.

Agribusiness Major

The Agribusiness major provides a foundation for employment in the agricultural sectors and rural regions and in businesses serving agriculture and rural regions, such as banks and financial institutions, production, marketing and buying cooperatives, value-added food producers, real estate and land management, agricultural chemical production and sales, and farms and ranches. Graduates of this program are employed in a variety of agribusiness operations throughout the United States. Agribusiness graduates have achieved prominence in positions in wholesale and retail sales and service, stock and commodity brokerage, real estate appraisal, banking and farm credit, insurance, and in farm and ranch operations. Classwork provides training in basic business and economics, as well as the specific management tools required for agricultural enterprises.

To graduate with a bachelor's degree in Agribusiness, a student must have a major GPA of 2.5 or higher, as well as a grade of C or better in each course required for the major. A C grade or better in ECON 1500, MATH 1100, STAT 2300, and PSY 1010 or SOC 1010 and an overall GPA of 2.67 or higher is required for admission into some required BA and MHR courses. Agribusiness majors with a dual major must satisfy the admission and graduation requirements of both majors. All required courses must be taken for a letter grade. ECON 3900, 4950, 4990, and 5950 cannot be used to meet economics elective requirements.

Agribusiness Major: ECON 1500, 1550 (or 2010), 3030, 3050, 4010, 4030, 5030, 5050, 5350; ACCT 2010, 2020; MATH 1050, 1100; MHR 2990; STAT 2300; ASTE 3090 (or BIS 2450), 3050 (or BIS 2550); and 12 credits of College of Agriculture electives. These 12 credits must be from courses offered by departments in the College of Agriculture other than the Department of Economics. Six of the 12 credits must be upper division.

Agribusiness Major (Business Emphasis): ECON 3030, 3050, 4010, 4030, 5030, 5050, 5350; MHR 4880 (or 4890); Complete the Business Core: ACCT 2010, 2020; BA 3400, 3500, 3700; BIS 2450, 2550; ECON 1500, 2010, 3400; MATH 1050, 1100; MHR 2990, 3110; STAT 2300. Students who complete the core requirements with a 2.67 or higher GPA may earn a dual major in Business in addition to a major in Agribusiness.

Agribusiness Major (Agricultural Systems Emphasis): ASTE 1010, 2200, 3050, 3090, 3600, 5260; ECON 1500, 1550 (or 2010), 3030, 3050, 4010, 4030, 5030, 5050, 5350; ACCT 2010, 2020; MATH 1050, 1100; MHR 2990; STAT 2300.

Agricultural Economics Major

The Agricultural Economics major emphasizes the development of quantitative skills in and a deeper understanding of economic theory. While this program provides a solid base for individuals desirous of careers in agricultural businesses, it is also an excellent preparation for graduate studies in economics, agricultural economics, natural resources, business, or law. The Agricultural Economics degree provides an excellent background for work in federal, state, and local government, as well as in the private sector. Graduates of this program are now working in positions involving the analysis of prices and markets, preparation of economic feasibility studies, and preparing economic forecasts.

To graduate with a bachelor's degree in Agricultural Economics, a student must have a major GPA of 2.5 or higher, as well as a grade of *C* or better in each course required for the major. All required courses must be taken for a letter grade. ECON 3900, 4950, 4990, and 5950 cannot be used to meet economics elective requirements.

Agricultural Economics Major: ECON 1500, 2010, 3030, 3050, 3400, 4030, 5000, 5010, 5030, 5310, 5330, and three of the following: ECON 5020, 5050, 5350, 5560, 5950; ACCT 2010, 2020; ASTE 3050 (or BIS 2550) 3090 (or BIS 2450); MATH 1050, 1100; STAT 2300.

International Agribusiness Major

The International Agribusiness major combines training in business, language skills, and economics courses that emphasize the role of the trade and development issues that are critical to operating in the increasingly internationalized agribusiness sector. The program provides a foundation for employment in agricultural and agribusiness sectors and in banks and financial institutions, production, marketing and buying cooperatives, value-added food producers, agricultural chemical production and sales, and farms and ranches in domestic and international settings. Classwork provides training in basic business and economics, as well as the specific management tools required for agricultural enterprises.

To graduate with a bachelor's degree in International Agribusiness, a student must have a major GPA of 2.5 or higher, as well as a grade of *C* or better in each course required for the major. All required courses must be taken for a letter grade. ECON 3900, 4950, 4990, 5950, and 5950 cannot be used to meet economics elective requirements.

International Agribusiness Major: ECON 1500, 2010, 3030, 3050, 3400, 4010, 4020, 4030, 5030, 5050 (or 5950), 5120, 5350, 5400; ACCT 2010; ASTE 6140; BIS 2450; MATH 1050, 1100; NFS 5510; PLSC 4300; STAT 2300; and a score of 3 or better on the Federal FSI Test or completion of a language minor.

Economics Major

Because the Economics major provides a strong grounding in economic theory, it helps open career opportunities that involve policy analysis. The Economics major has been a very popular

dual major for Finance and Accounting majors because of the added theoretical and analytical dimension that advanced studies in economics can contribute to Finance and Accounting majors. This combination is excellent preparation for students interested in advanced studies in Accounting or Finance.

The Economics major also provides students in the humanities, and social and natural sciences with an opportunity to learn policy analysis tools. Whether the students are directly interested in policy or simply interested in the impact of policy within their chosen primary major, economics introduces a robust and empirically verified paradigm for explaining the behavior of social systems and their interaction with cultural, biological, and physical resources.

To graduate with a bachelor's degree in Economics, a student must have a minimum GPA of 2.5 in courses required for the major and a grade of *C* or better in each course required for the major. A *C* grade or better in ECON 1500, MATH 1100, STAT 2300, and PSY 1010 or SOC 1010 and an overall GPA of 2.67 or higher is required for admission into some BA and MHR courses required for the managerial emphasis. Economics majors with a dual major must satisfy the admission and graduation requirements of both majors. All required courses must be taken for a letter grade. ECON 3900, 4950, 4990, and 5950 cannot be used to meet economics elective requirements.

Economics Major: ECON 1500, 2010, 3400, 4010 (or 5010), 4020 (or 5000); MATH 1050, 1100; STAT 2300; and 6 credits of upper-division ECON electives.

The **Economic Theory Emphasis** is designed for students who are interested in preparing for graduate studies in economics or agricultural economics and for students who are preparing for a career that requires training in quantitative economic analysis. Graduates have employment opportunities in business and government, as well as opportunities for continuing their education in graduate economics programs or in professional schools. Economists are often involved in policy analysis for government agencies and nongovernmental organizations.

Economics Major (Economic Theory Emphasis): ECON 1500, 2010, 3400, 5000, 5010, 5100, 5310, 5330, 5950; ACCT 2010, 2020; MATH 1050, 1100; STAT 2300; and 12 credits of upper-division ECON electives.

The **Managerial Economics Emphasis** is for students who are planning for careers in business. The program can serve as a terminal program for those planning to enter the job market on graduation or as excellent preparation for students who intend to pursue an MBA or MPA.

Economics Major (Managerial Economics Emphasis): ECON 1500, 2010, 3400, 4010, 4020, 5310, 5330, 5950; ACCT 2010, 2020; BA 3400, 3500, 3700; BIS 2450, 2550; BUS 1000; MATH 1050, 1100; MHR 2990, 3110; PSY 1010 (or SOC 1010); STAT 2300; and 6 credits of upper-division ECON electives.

The **Prelaw Economics Emphasis** is for students who plan to attend law school or pursue a career related to political science, and who want to obtain a strong foundation in economics. The large number of elective credits included in this emphasis area provides enough flexibility for students to custom design their program of study to meet individual interests and educational goals. Several students have taken advantage of this flexibility to design a dual major with Economics and Political Science.

Economics Major (Prelaw Economics Emphasis): ECON 1500, 2010, 3170 (or POLS 3170), 3400, 4010 (or 5010), 4020 (or 5000), 5950; MATH 1050, 1100; POLS 1100; STAT 2300; 6 credits of upper-division ECON electives; and 3 credits of upper-division POLS electives.

Minor Requirements

Economics Minor: ECON 1500, 2010 (or 1550), 4010 (or 5010), and 6 credits of upper-division ECON electives. ECON 3900 cannot be used to meet economics elective requirements.

Economics Teaching Minor: ECON 1500, 2010 (or 1550), 3400 (or 5400), 5100, 5110; BIS 3000, 3300 (or 4300), 4400.

Agribusiness Management Minor: ECON 1550, 3030, 3050, 4030; ACCT 2010.

Agricultural Economics Minor: ECON 1500, 2010 (or 1550), 4010 (or 5010), 4030, 5030.

Additional Information

For more information about bachelor's degree requirements, see the major requirement sheets available from the Department of Economics.

Financial Support

The Department of Economics, the College of Agriculture, and the College of Business award scholarships in addition to those available through the University Financial Aid Office. Information and application forms may be obtained from the college or departmental offices.

Graduate Programs

The MA, MS, and PhD in Economics, along with the MS in Applied Economics, are offered jointly through the College of Agriculture and College of Business. The MBA is offered through the College of Business. The International MBA in Food and Agribusiness is offered through the Royal Agricultural College (RAC), Cirencester, England.

Objectives

Economics graduate training emphasizes economic theory, critical thinking, and quantitative analysis. This foundation is a means to an end, not an end in itself: theory and quantitative methods are tools used in applied courses, in theses and dissertations, and in other research and extension activities carried out in the department.

The **Master of Science and Master of Arts in Economics** are intended to prepare students for doctoral studies in economics. Consequently, students are required to take the same first-year core theory and econometrics courses as the PhD students, with specialization courses in the second year. The **MS in Applied Economics** is a terminal degree that prepares students for positions in industry; private consulting firms; local, regional, and national policy-making agencies; private not-for-profit organizations; and community/regional economic planning and develop-

ment agencies. The **Doctor of Philosophy in Economics** is intended to prepare students for faculty and research positions with dual fields in Trade and Development and Natural Resource and Environmental Economics. All PhD students are required to complete these "field" sequences. Students interested in other specialties are discouraged from applying.

Admission Requirements

Applicants must have earned a bachelor's degree from an accredited college or university, maintained a grade point average of at least 3.0 for the last 60 semester credits earned, and score in at least the 40th percentile on either the Graduate Record Exam (GRE) or Graduate Management Admission Test (GMAT). In addition, international applicants from non-English-speaking countries must score at least 550 on the Test of English as a Foreign Language (TOEFL). Satisfaction of these minimum admission requirements does not guarantee admission. Applications for graduate study from students trained in disciplines other than economics are welcomed. However, all applicants are expected to have: (1) an understanding of intermediate microeconomic and macroeconomic theory, (2) preparation in mathematical economics, and (3) preparation in probability and statistics. In addition, applicants are expected to have strong written and oral communications skills.

Degree Requirements

Doctor of Philosophy in Economics. PhD students are required to: (1) complete the first-year core (ECON 7060, 7130, 7140, 7230, 7240, 7310, 7350, 7360); (2) perform successfully on a written qualifying examination based on the first-year core; (3) complete the advanced core (ECON 7150, 7250, 7320, 7330); (4) complete the International Trade and Development and Natural Resource and Environmental Economics field sequences (ECON 7400, 7500, 7510, 7800); (5) complete a research dissertation and give an oral defense of the dissertation; and (6) meet University requirements for dissertation research and total credit hours.

Master of Science in Applied Economics. To complete an MS degree in Applied Economics, students are required to: (1) complete the applied core (ECON 6000, 6060, 6100, 6300, 6330); (2) complete a specialization in: (a) agricultural economics (ECON 6030 and 6040), (b) natural resource economics (ECON 6500 and 6510), or (c) regional economic development (ECON 6700 and 6710); (3) submit and orally defend a thesis (Plan A) or research report (Plan B); and (4) complete elective class or thesis research credits to meet Plan A, B, or C graduation requirements. Plan A requires at least 30 credits and must include at least 6 thesis research credits. Plan B requires at least 30 credits and must include 2 to 3 thesis research credits. Plan C has no research component and requires at least 33 credits. (No more than 6 undergraduate credits may be used in meeting degree requirements.)

Master of Science and Master of Arts in Economics. Students are required to complete the first-year core (ECON 6000, 6060, 7130, 7140, 7240, 7310, 7350, 7360) and to submit and orally defend a thesis (Plan A) or research report (Plan B). The department also accepts Plan C, which has no research component. MA students must satisfy the foreign language requirement. Plan A requires at least 30 credits and must include at least 6 thesis research credits. Plan B requires at least 30 credits and must include 2 to 3 thesis research credits. Plan C requires at least 33 credits. (No more than 6 undergraduate credits may be used in meeting degree requirements.)

Master of Business Administration (Agribusiness Management, International Economics, or Quantitative Economic Analysis Specialization). A student may receive a College of Business Master of Business Administration degree with a specialization in Agribusiness Management, International Economics, or Quantitative Economic Analysis by completing the MBA advanced core (see the MBA program description on pages 153-154) and 12 specialization credits. ECON 6330 should be taken to satisfy the quantitative methods requirement. The **Agribusiness Management** specialization requires: ECON 6030, 6040, 6300; and either ECON 6500 or 6700. The **International Economics** specialization requires ECON 5150, 5400, 6000; and POLS 6220. The **Quantitative Economic Analysis** specialization requires ECON 5310, 6300, 6330; and STAT 5100.

International MBA in Food and Agribusiness. The Department of Economics participates with the Royal Agricultural College (RAC) in Cirencester, England to offer this degree. The degree is awarded by the RAC. Students study at USU during fall semester, and then study spring semester at the RAC. Students complete a team project and a thesis. The degree is designed to prepare students to be agribusiness managers in an international environment. Applicants for admission to the International MBA are expected to have completed a common body of knowledge core at an AACSB accredited program. The common body of knowledge includes: ACCT 2010, 2020; BA 3400, 3500, and 3080 or 3700; BIS 2450; ECON 1500, 2010; MATH 1100; STAT 2300; and MHR 2990 and 3110. Alternatively, students may choose to gain the necessary competencies by attending the 18-credit Accelerated Business Core (BUS 6160), which is offered during summer semester. Required courses to be completed at USU include: ACCT 6350; ECON 5030 or 6030, ECON 6040; BA 6520 or 4590; and MHR 6500. During spring semester, courses in finance, marketing and advertising, human resource management, macroeconomics, and business strategy are taught at the RAC. Participating students pay USU tuition and are expected to complete the program in 12-15 months.

Research

The department maintains an active and productive research program. The results of this research are published in professional journals, books, and technical reports. Financial support for the departmental research program is provided by the Utah Agricultural Experiment Station, the colleges of Agriculture and Business, the Office of the Vice President for Research, and by a combination of public and private extramural sources. The Economics Research Institute provides support and coordination for some of the department's research activities. Graduate students are an integral part of departmental research programs.

Financial Assistance and Assistantships

The department offers teaching and research assistantships to qualified graduate students. These are awarded on a competitive basis, and all accepted students are considered eligible. However, while the department makes every effort to assist students in obtaining financial assistance, acceptance into department programs does not guarantee financial assistance.

Financial assistance is not provided to PhD students who fail to pass the written qualifying exam nor to graduate students who fail to make satisfactory progress toward completion of their degrees.

Economics Faculty

Professors

DeeVon Bailey, agricultural economics
Basudeb Biswas, international trade and economic development
Keith R. Criddle, resource economics and quantitative methods
Christopher Fawson, public finance and econometrics, Vice Provost for Academic and International Affairs
Terrence F. Glover, production economics and policy
E. Bruce Godfrey, agricultural and resource economics
L. Dwight Israelsen, comparative systems and economic history
Paul M. Jakus, natural resource and environmental economics, nonmarket valuation
John E. Keith, agricultural and resource economics
W. Cris Lewis, regional-urban and managerial economics
Kenneth S. Lyon, economic theory
H. Craig Petersen, regulation and antitrust and managerial economics; Director of Analysis, Assessment, and Accreditation
Donald L. Snyder, agricultural and resource economics, Associate Dean for Academic Programs

Professors Emeriti

Roice H. Anderson
Larry K. Bond
Rondo A. Christensen
Lynn H. Davis
Reed R. Durtschi
Herbert H. Fullerton
Gary B. Hansen
Allen D. LeBaron
Darwin B. Nielsen
Morris D. Whitaker

Associate Professors

Tyler J. Bowles, econometrics and international economics
Steven S. Vickner, agribusiness, food marketing

Associate Professor Emeritus

Glenn F. Marston

Assistant Professors

Arthur J. Caplan, environmental economics and applied microeconomic theory
David L. Dickinson, labor and experimental economics
John P. Gilbert, international trade theory and policy, applied general equilibrium modeling, development economics
Rimma Shiptsova, international trade, food safety, econometrics
Ruby A. Ward, agribusiness management and operations research

Human Resources Specialist

Marion T. Bentley, manpower economics

Course Descriptions

Economics (ECON), pages 379-382