

Department of Applied Economics

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Graduate Program Director:

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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; Doctor of Philosophy (PhD) in Economics; the department also participates in the International MBA in Food and Agribusiness (offered through the Royal Agricultural College in Cirencester, England). The Agribusiness major is structured to facilitate a dual major with companion majors with the Huntsman School of Business.

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

Undergraduate Programs

Objectives

Economics is the study of allocating our scarce resources among humankind's seemingly endless variety of needs and wants. This places economists and economic analysis at the center of virtually every important discussion and debate about how nations, firms, and people should organize resources to address these needs and wants. As a result, economics offers an exciting and dynamic field of study and research for students, preparing them well to become tomorrow's decision makers.

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 Department of Applied Economics. All transfer students, whether transferring from within Utah State University or from other colleges and universities, must have an overall minimum GPA of 2.5 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 Applied 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 Department of Applied Economics.

Graduation Requirements

To receive a bachelor's degree in Agribusiness, Agricultural 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 sector and in businesses and institutions 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 ECN 1500, MATH 1100, and STAT 2300 and an overall GPA of 2.67 or higher is required for admission into some required FIN and MGT 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.

Agribusiness Major Requirements

All courses required for the Agribusiness Major should be taken for a letter grade. Students must earn a grade of C or better in each course.

Required Courses:

ACCT 2010 Survey of Accounting I (F,Sp,Su).....	3
ACCT 2020 Survey of Accounting II (F,Sp,Su).....	3
APEC/ECN 2010 (BSS) Introduction to Microeconomics (F,Sp,Su)	3
APEC 3010 Introduction to Agricultural Economics and Agribusiness (Sp)	3
APEC 3012 Introduction to Natural Resource and Regional Economics (F)	3
APEC 3020 Firm Finance and Records Analysis (Sp)	3
APEC 3310 Mathematics in Agricultural and Resource Economics (F)	3
APEC 4020 Macroeconomics and Trade (Sp)	3
APEC 5010 (QI) Firm Marketing and Price Analysis (F)	3
APEC 5015 Firm Management, Planning, and Optimization (F).....	3
APEC 5020 Strategic Firm Management (Sp)	3
ASTE 3090 Computer Applications in Agriculture (F) (3 cr) or MIS 2100 Principles of Management Information Systems (F,Sp,Su) (3 cr)	3
ASTE 3050 (CI) Technical and Professional Communication Principles in Agriculture (F,Sp) (3 cr) or MIS 2200 (CI) Business Communication (F,Sp,Su) (3 cr)	3
ECN 1500 (BAI) Introduction to Economic Institutions, History, and Principles (F,Sp,Su).....	3
APEC/ECN 4010 Intermediate Microeconomics (Sp) (3 cr) or ECN 3010 (DSS) Managerial Economics (F,Sp) (3 cr).....	3
MATH 1050 (QL) College Algebra (F,Sp,Su).....	4
MATH 1100 (QL) Calculus Techniques (F,Sp,Su)	3
MGT 2050 Legal and Ethical Environment of Business (F,Sp,Su)	3
STAT 2300 (QL) Business Statistics (F,Sp,Su)	4
College of Agriculture electives ¹	12

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Agribusiness Major, Business Option

All courses required for the Agribusiness Major, Business Option should be taken for a letter grade. Students must earn a grade of C or better in each course. Students may be eligible for a second major in Business. For further information, contact an advisor. **Note:** Student transcripts and diplomas will list *only* the Agribusiness Major, not the Business Option.

Required Courses:

ACCT 2010 Survey of Accounting I (F,Sp,Su).....	3
ACCT 2020 Survey of Accounting II (F,Sp,Su).....	3
APEC/ECN 2010 (BSS) Introduction to Microeconomics (F,Sp,Su).....	3
APEC 3010 Introduction to Agricultural Economics and Agribusiness (Sp).....	3
APEC 3012 Introduction to Natural Resource and Regional Economics (F).....	3
APEC 3020 Firm Finance and Records Analysis (Sp).....	3
APEC 3310 Mathematics in Agricultural and Resource Economics (F).....	3
APEC 4020 Macroeconomics and Trade (Sp).....	3
APEC 5010 (QI) Firm Marketing and Price Analysis (F).....	3
APEC 5015 Firm Management, Planning, and Optimization (F).....	3
APEC 5020 Strategic Firm Management (Sp).....	3
ECN 1500 (BAI) Introduction to Economic Institutions, History, and Principles (F,Sp,Su).....	3
APEC/ECN 4010 Intermediate Microeconomics (Sp) (3 cr) or	
ECN 3010 (DSS) Managerial Economics (F,Sp) (3 cr).....	3
ECN 3400 (DSS) International Economics for Business (F,Sp,Su).....	3
FIN 3400 (QI) Corporate Finance (F,Sp,Su).....	3
MATH 1050 (QL) College Algebra (F,Sp,Su).....	4
MATH 1100 (QL) Calculus Techniques (F,Sp,Su).....	3
MGT 2050 Legal and Ethical Environment of Business (F,Sp,Su).....	3
MGT 3110 (DSS) Managing Organizations and People (F,Sp,Su).....	3
MGT 3500 Fundamentals of Marketing (F,Sp,Su).....	3
MGT 3700 Operations Management (F,Sp,Su).....	3
MIS 2100 Principles of Management Information Systems (F,Sp,Su).....	3
MIS 2200 (CI) Business Communication (F,Sp,Su).....	3
STAT 2300 (QL) Business Statistics (F,Sp,Su).....	4

Agribusiness Major, Agricultural Systems Option

All courses required for the Agribusiness Major, Agricultural Systems Option should be taken for a letter grade. Students must earn a grade of C or better in each course. Students who complete this option are eligible to earn a dual major in Agricultural Systems Technology. Note: Student transcripts and diplomas will list only the Agribusiness Major, not the Agricultural Systems Option.

Required Courses:

ACCT 2010 Survey of Accounting I (F,Sp,Su).....	3
ACCT 2020 Survey of Accounting II (F,Sp,Su).....	3
APEC/ECN 2010 (BSS) Introduction to Microeconomics (F,Sp,Su).....	3
APEC 3010 Introduction to Agricultural Economics and Agribusiness (Sp).....	3
APEC 3012 Introduction to Natural Resource and Regional Economics (F).....	3
APEC 3020 Firm Finance and Records Analysis (Sp).....	3
APEC 3310 Mathematics in Agricultural and Resource Economics (F).....	3
APEC 4020 Macroeconomics and Trade (Sp).....	3
APEC 5010 (QI) Firm Marketing and Price Analysis (F).....	3
APEC 5015 Firm Management, Planning, and Optimization (F).....	3
APEC 5020 Strategic Firm Management (Sp).....	3
ASTE 1010 Introduction to Agricultural Systems Technology (F).....	3
ASTE 2200 Electricity in Agricultural Systems (Sp).....	3

ASTE 3030 Metal Welding Processes and Technology in Agriculture (F) (3 cr) or	
ASTE 4100 Agricultural Structures and Environment (Sp) (3 cr).....	3
ASTE 3050 (CI) Technical and Professional Communication Principles in Agriculture (F,Sp).....	3
ASTE 3080 Compact Power Units for Agricultural and Turfgrass Applications (Sp) (3 cr) or	
ASTE 3200 Irrigation Principles and Practices (Sp) (3 cr).....	3
ASTE 3090 Computer Applications in Agriculture (F).....	3
ASTE 3600 (QI) Management of Agricultural Machinery Systems (Sp).....	3
ASTE 5260 (CI) Environmental Impacts of Agricultural Systems (F).....	3
ECN 1500 (BAI) Introduction to Economic Institutions, History, and Principles (F,Sp,Su).....	3
APEC/ECN 4010 Intermediate Microeconomics (Sp) (3 cr) or	
ECN 3010 (DSS) Managerial Economics (F,Sp) (3 cr).....	3
MATH 1050 (QL) College Algebra (F,Sp,Su).....	4
MATH 1100 (QL) Calculus Techniques (F,Sp,Su).....	3
MGT 2050 Legal and Ethical Environment of Business (F,Sp,Su).....	3
SOIL 4000 Soil and Water Conservation (F).....	4
STAT 2300 (QL) Business Statistics (F,Sp,Su).....	4

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.

Agricultural Economics Major Requirements

All courses required for the Agricultural Economics Major should be taken for a letter grade. Students must earn a grade of C or better in each course.

Required Courses:

ACCT 2010 Survey of Accounting I (F,Sp,Su).....	3
ACCT 2020 Survey of Accounting II (F,Sp,Su).....	3
APEC/ECN 2010 (BSS) Introduction to Microeconomics (F,Sp,Su).....	3
APEC 3010 Introduction to Agricultural Economics and Agribusiness (Sp).....	3
APEC 3012 Introduction to Natural Resource and Regional Economics (F).....	3
APEC 3310 Mathematics in Agricultural and Resource Economics (F).....	3
APEC/ECN 4010 Intermediate Microeconomics (Sp).....	3
APEC 4020 Macroeconomics and Trade (Sp).....	3
APEC 5015 Firm Management, Planning, and Optimization (F).....	3
APEC/ECN 5330 (QI) Applied Econometrics (Sp).....	3
APEC 5560 Natural Resource and Environmental Economics (Sp).....	3
ASTE 3090 Computer Applications in Agriculture (F) (3 cr) or	
MIS 2100 Principles of Management Information Systems (F,Sp,Su) (3 cr).....	3

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ASTE 3050 (CI) Technical and Professional Communication Principles in Agriculture (F,Sp) (3 cr) or	
MIS 2200 (CI) Business Communication (F,Sp,Su) (3 cr)	3
ECN 1500 (BAI) Introduction to Economic Institutions, History, and Principles (F,Sp,Su)	3
ECN 3400 (DSS) International Economics for Business (F,Sp,Su)	3
APEC 5950 Senior Project (F, Sp)	3
MATH 1050 (QL) College Algebra (F,Sp,Su)	4
MATH 1100 (QL) ² Calculus Techniques (F,Sp,Su)	3
STAT 2300 (QL) Business Statistics (F,Sp,Su)	4

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.

International Agribusiness Major Requirements

For this major, students must score three or better on the Federal FSI Test or complete a language minor. All the following courses should be taken for a letter grade. Students must earn a grade of C or better in each course.

Required Courses:

ACCT 2010 Survey of Accounting I (F,Sp,Su)	3
APEC/ECN 2010 (BSS) Introduction to Microeconomics (F,Sp,Su)	3
APEC 3010 Introduction to Agricultural Economics and Agribusiness (Sp)	3
APEC 3012 Introduction to Natural Resource and Regional Economics (F)	3
APEC 3310 Mathematics in Agricultural and Resource Economics (F)	3
APEC 4020 Macroeconomics and Trade (Sp)	3
ECN 1500 (BAI) Introduction to Economic Institutions, History, and Principles (F,Sp,Su)	3
APEC/ECN 4010 Intermediate Microeconomics (Sp) (3 cr) or	
ECN 3010 (DSS) Managerial Economics (F,Sp) (3 cr)	3
ECN 3400 (DSS) International Economics for Business (F,Sp,Su)	3
ECN 4020 Intermediate Macroeconomics (F,Sp)	3
ECN 5400 International Trade Theory (F)	3
ECN 5950 (CI) Senior Project (Sp)	3
MATH 1050 (QL) College Algebra (F,Sp,Su)	4
MATH 1100 (QL) Calculus Techniques (F,Sp,Su)	3
MIS 2100 Principles of Management Information Systems (F,Sp,Su)	3
NFS 5510 Food Laws and Regulations (Sp)	2
POLS 5120 Economics of Russia and Eastern Europe, 9th Century to 21st Century (F)	3
STAT 2300 (QL) Business Statistics (F,Sp,Su)	4

Minor Requirements

Agribusiness Management Minor:

ACCT 2010 Survey of Accounting I (F,Sp,Su)	3
APEC 3010 Introduction to Agricultural Economics and Agribusiness (Sp)	3
APEC 3020 Firm Finance and Records Analysis (Sp)	3
APEC 3310 Mathematics in Agricultural and Resource Economics (F)	3
ECN 1500 (BAI) Introduction to Economic Institutions, History, and Principles (F,Sp,Su)	3

Agricultural Economics Minor:

APEC/ECN 2010 (BSS) Introduction to Microeconomics (F,Sp,Su)	3
APEC 3310 Mathematics in Agricultural and Resource Economics (F)	3
APEC 4020 Macroeconomics and Trade (Sp)	3
APEC 5010 (QI) Firm Marketing and Price Analysis (F)	3
ECN 1500 (BAI) Introduction to Economic Institutions, History, and Principles (F,Sp,Su)	3
APEC/ECN 4010 Intermediate Microeconomics (Sp)	3

¹These 12 credits must be selected from courses offered by departments within the College of Agriculture, excluding courses offered by the Department of Applied Economics. Six of the 12 credits must be chosen from upper-division courses (i.e., courses numbered 3000 or above).

²The regular calculus series (MATH 1210 and 1220) is recommended for students contemplating graduate studies in economics. MATH 1210 will fulfill the MATH 1100 requirement.

Four-year Degree Plans (8 semesters)

Four-year degree plans for majors offered by the Department of Applied Economics can be found at:

<http://www.usu.edu/degreeplans/>

Students will need to meet with their advisor periodically to ensure all requirements are being met.

Departmental Honors

Students who would like to experience greater academic depth within their major are encouraged to enroll in departmental honors. Through original, independent work, Honors students enjoy the benefits of close supervision and mentoring, as they work one-on-one with faculty in select upper-division departmental courses. Honors students also complete a senior project, which provides another opportunity to collaborate with faculty on a problem that is significant, both personally and in the student's discipline. Participating in departmental honors enhances students' chances for obtaining fellowships and admission to graduate school. Minimum GPA requirements for participation in departmental honors vary by department, but usually fall within the range of 3.30-3.50. Students may enter the Honors Program at almost any stage in their academic career, including at the junior (and sometimes senior) level. The campus-wide Honors Program, which is open to all qualified students regardless of major, offers a rich array of cultural and social activities, special classes, and the benefit of Honors early registration. Interested students should contact the Honors Program, Main 15, (435) 797-2715, honors@usu.edu. Additional information can be found online at: <http://honors.usu.edu/>

Financial Support

The Department of Applied Economics and the College of Agriculture 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.

Additional Information

For more information about undergraduate programs in the Department of Applied Economics, see the major requirement sheet, available from the department, or accessed online at: <http://www.usu.edu/majorsheets/>

Graduate Programs

The MS in Applied Economics and the PhD in Economics are offered by the Department of Applied Economics. The International MBA in Food and Agribusiness is offered through the Royal Agricultural College (RAC), Cirencester, England.

Objectives

Graduate training in the Department of Applied Economics 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 **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 development 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 the Graduate Record Exam (GRE). The Graduate Management Admission Test (GMAT) is required for the International MBA in Food and Agribusiness. 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

Master of Science in Applied Economics

To complete an MS degree in Applied Economics, students are required to: (1) complete the applied core (APEC 6000, 6100, 6300, 6330); (2) complete a specialization in: (a) agricultural economics (ACCT 6350; APEC 6030, 6040, 6250; ECN 5300; MGT 5640, 6520), (b) natural resource economics (APEC 6500 and 6510), or (c) regional economic development (APEC 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.)

Doctor of Philosophy in Economics

PhD students are required to: (1) complete the first-year core (APEC 7130, 7140, 7230, 7240, 7310, 7320, 7350, 7360); (2) perform successfully on a written qualifying examination based on the first-year core; (3) complete the advanced core (APEC 7150, 7330); (4) complete the International Trade and Development and Natural Resource and Environmental Economics field sequences (APEC 7400, 7500, 7510); (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.

International MBA in Food and Agribusiness

The Department of Applied 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; ECN 1500, 2010; FIN 3400; MGT 2050, 3110, 3500; MGT 3080 or 3700; MATH 1100; MIS 2100; and STAT 2300. Required courses to be completed at USU include: ACCT 6350; APEC 6030, 6040, 6330; and MGT 4590. During spring semester, courses in finance, marketing and advertising, human resource management, macroeconomics, business strategy, agricultural food policy, and food chain industry are taught at the RAC. Participating students pay USU tuition and are expected to complete the program in 12-18 months.

Research

The Department of Applied Economics 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 College of Agriculture, 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 of Applied Economics 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.

Department of Applied Economics

Applied Economics Faculty

Professors

DeeVon Bailey, agricultural economics

Dillon M. Feuz, production and finance, marketing and price analysis

Paul M. Jakus, Department Head; natural resource and environmental economics, nonmarket valuation

Kenneth S. Lyon, economic theory

Donald L. Snyder, agricultural and resource economics

Associate Professors

Arthur J. Caplan, environmental economics and applied microeconomic theory

Gholamreza Oladi, international economics, econometrics

Ruby A. Ward, agribusiness management and operations research

Adjunct Associate Professor

John P. Gilbert, international trade theory and policy, applied general equilibrium modeling, development economics

Human Resources Specialist

Marion T. Bentley, manpower economics

Professors Emeritus

Roice H. Anderson

Larry K. Bond

Rondo A. Christensen

Lynn H. Davis

Reed R. Durtschi

Herbert H. Fullerton

E. Bruce Godfrey

Gary B. Hansen

John E. Keith

Allen D. LeBaron

Darwin B. Nielsen

Morris D. Whitaker

Associate Professor Emeritus

Glenn F. Marston

Course Descriptions

Applied Economics (APEC), pages 499-501