

# Agricultural Economics (ARE)

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## **ARE 104 Agricultural Business Management** (3 credit hours)

Insights into the management skills of a successful agribusiness firm manager. A topical approach to analytical and planning techniques applicable to business decisions. Managerial concepts such as financial analysis, budgeting, investment analysis, capital acquisition, financial and risk management of agribusiness firms.

*Typically offered in Fall and Spring*

## **ARE 106 Agri Business Law** (3 credit hours)

The application of legal principles to agribusiness. Includes a review of our legal system contracts, real property, personal property torts, business organization, estate planning, and laws affecting agribusiness.

*Typically offered in Fall and Spring*

## **ARE 112 Agricultural & Agribusiness Marketing** (3 credit hours)

Marketing concepts, techniques and management of the U.S. marketing system from agricultural production, agribusiness, and traditional business perspectives. Broad, basic knowledge of marketing objectives, the marketing environment, strategic planning, marketing information sources, consumer demographics and lifestyle characteristics, product planning, distribution planning, promotion planning, and price planning.

*Typically offered in Fall only*

## **ARE 113 Principles of Salesmanship** (3 credit hours)

How To" course in selling. Understanding customer's behavior, establishing and maintaining customer rapport, and negotiating a sale. Developing sales skills through discussion, role playing and demonstrations. Emphasis on building self-confidence through selling exercises involving class participation, special assignments, and targeted presentations.

*Typically offered in Fall and Spring*

## **ARE 114 Value Added Agriculture and Niche Marketing** (3 credit hours)

Value Added Agriculture and Niche Marketing are ways to increase farm revenue without having to go off farm for employment. This course is designed to provide insights into the opportunities that are available to increase farm revenue, to see what other farms are currently doing with value added within the region, and to create a value added business plan for expanding farm offerings. Site visits are required components of this course. University transportation provided to all site visits. Student transportation (estimated at \$30 per student and site visit (estimated at \$7 each for 2 sites) fees apply.

*Typically offered in Fall only*

## **ARE 115 Agribusiness Accounting** (3 credit hours)

Introduction to basic accounting principles and concepts applicable to an agribusiness firm. Exposure to journals, ledgers and financial statements. Topics of the accounting cycle, inventories, payrolls, accounts receivable, income taxes and the potential use of computers.

*Typically offered in Fall and Spring*

## **ARE 121 Agricultural Finance** (3 credit hours)

Agricultural Finance teaches students introductory concepts for financial management decisions in agricultural/farm businesses. Topics include building a financial control process, developing risk management strategies, and analyzing investment opportunities. Emphasis is on developing skills necessary to create a financial business plan.

Restriction: AGI Only

*Typically offered in Spring only*

## **ARE 132 Management of Personnel** (3 credit hours)

Personnel problems of recruiting, selecting, training, paying, and motivating employees of an agribusiness firm. Improving organizational effectiveness, functioning of a production supervisor, resolution of conflicts and leadership development.

*Typically offered in Fall and Spring*

## **ARE 133 Agricultural & Environmental Policy** (3 credit hours)

History of agricultural and environmental policy, policy formation, agricultural programs, effects of agricultural production on the environment, benefits and costs of agricultural and environmental policy, state of the environment, environmental regulations and their enforcement, optimal level of pollution, incentive-based environmental regulation, outlook for agricultural and environmental policy, and the sustainability of agriculture and of the environment.

*Typically offered in Fall, Spring, and Summer*

## **ARE 141 Personal Financial Management** (3 credit hours)

Economic analysis of personal decisions related to consumer purchases, time value of money, taxes, financial risk management, investment strategies, retirement planning and estate planning. Relationship of an individual's life cycle to budgeting and financial goals. Background information on wise use of credit, home purchase, life insurance, property insurance, health insurance and investment fundamentals.

*Typically offered in Spring only*

## **ARE 194 International Agribusiness Management Study Abroad** (1-6 credit hours)

This course is designed to maximize student potential for success by developing a globally and multi-culturally competent agricultural and agribusiness workforce. This course addresses these issues by providing opportunities for students to study abroad in various locations around the world, with different destinations offered each academic year. Credit hours are variable based on length or travel and classroom instruction pre- and post-travel consistent with NCSU policies and practices. Course may be repeated for credit to visit different destinations only. Significant expenses for travel are involved. Please see the instructor for specific program details.

*Typically offered in Spring and Summer*

**ARE 201/ARE 201A Introduction to Agricultural & Resource Economics** (3 credit hours)

Introduction to economic principles of marginal benefits and costs with application to consumer and producer decisions. Functions of market exchange systems in determining prices and quantities and creation of wealth. Property rights and opportunities for exchange. Role of government in dealing with agricultural and resource problems. Macroeconomic analysis including inflation, unemployment, money and banking system. Credit will not be given for both ARE 201 and either EC 201 or EC 205.

*GEP Social Sciences*

*Typically offered in Fall, Spring, and Summer*

**ARE 201A/ARE 201 Introduction to Agricultural & Resource Economics** (3 credit hours)

Introduction to economic principles of marginal benefits and costs with application to consumer and producer decisions. Functions of market exchange systems in determining prices and quantities and creation of wealth. Property rights and opportunities for exchange. Role of government in dealing with agricultural and resource problems. Macroeconomic analysis including inflation, unemployment, money and banking system. Credit will not be given for both ARE 201 and either EC 201 or EC 205.

*GEP Social Sciences*

*Typically offered in Fall and Spring*

**ARE 215 Small Business Accounting** (3 credit hours)

Record keeping for small businesses organized as sole proprietorships, partnerships, and family held corporations. Double entry accounting principals applied to service and merchandising businesses. General Journals, Combination Journals, Subsidiary Journals, Ledgers, Accounts Receivable, Accounts Payable, Posting, Worksheets. Financial Statements, Closing, Payrolls, Cost Basis, Depreciation, Section 179, Amortization, Financial Adjustments, and Income Tax Forms. Both manual and computerized systems. Semester project of keeping records for a business for a portion of the year.

Prerequisite: ARE 201 or EC 201 or EC 205

*Typically offered in Fall, Spring, and Summer*

**ARE 260 Marketing and Risk Management in the Pork Industry** (1 credit hours)

A comprehensive overview of structure and trends in markets and marketing options available in the swine industry. Management of market risk with hedging or other contracts.

Prerequisite: ANS 150

*Typically offered in Spring only*

*This course is offered alternate odd years*

**ARE 270 Principles of Agribusiness Entrepreneurship** (3 credit hours)

Principles of Agribusiness Entrepreneurship is the first course of three in the Agribusiness Entrepreneurship course sequence. It teaches students the applied entrepreneurship skills needed to identify and create an opportunity in agribusiness and how to develop a business canvas model and conduct a feasibility analysis for a real business idea. Students attend class at the NC State E-Clinic in HQ Raleigh for four classes and transportation is included.

Corequisite: ARE 201

*Typically offered in Fall and Spring*

**ARE 290 Professional Development in Agricultural Business Management** (3 credit hours)

This course focuses on establishing professional development foundations for incoming students in Agricultural Business Management. The material emphasizes on diversity in the field and workplace, career exploration, and preparation for internship and work applications. Topics include self-reflection, goal-setting, professional development, resume building, job shadowing, and identity exploration from local, global, and workplace perspectives. Non-scheduled class time for field trips or out-of-class activities are required one day per semester for this class. If transportation will pose a problem for a student, the department will provide transportation. This course is restricted to students in the Agricultural Business Management major or admission by departmental approval.

Restriction: Agricultural Business Management major or departmental approval.

*Typically offered in Fall only*

**ARE 295 Special Topics in Agricultural & Resource Economics (200 Level)** (1-6 credit hours)

An offering of new freshman to sophomore-level courses on trial basis with topics varying based on offerings. Repetition with different course content acceptable up to 4 times and for a total of 12 units.

*Typically offered in Fall, Spring, and Summer*

**ARE 301/EC 301 Intermediate Microeconomics** (3 credit hours)

Functioning of the market economy, role of prices in determining the allocation of resources, the functioning of the firm in the economy, forces governing the production and consumption of economic goods.

Prerequisite: MA 121 or MA 131 or MA 141 and EC 201 or EC 205 or ARE 201

*Typically offered in Fall and Spring*

**ARE 303 Farm Management** (3 credit hours)

Analytical and planning techniques for making business decisions centered around farm business applications. Economic principles and management concepts such as budgeting, accounting, finance credit, investment analysis, business organization, risk, and taxes as related to practical problems of operating a farm business.

Prerequisite: ARE 201 or EC 201 or EC 205

*Typically offered in Fall only*

**ARE 304 Agribusiness Management** (3 credit hours)

Management decision-making by food, fiber, horticulture, and forestry firms. Emphasis on current agribusiness topics such as information utilization, strategic planning, organization structures, competitor intelligence, pricing, leadership, crisis management, ethics, and human resource management. Business communications, agribusiness case studies, and a computerized management simulation game.

Prerequisite: ARE 201 or EC 201 or EC 205

*Typically offered in Fall, Spring, and Summer*

**ARE 306 Agricultural Law** (3 credit hours)

Legal principles of practical importance in an agricultural setting: the court system; tort, contract and real and personal property law; legal aspects of organizing an agribusiness; environmental and labor regulations affecting agriculture; income and estate taxation of agriculture. Credit for both ARE 306 and BUS 307 is not allowed

Prerequisite: ARE 201 or EC 201 or EC 205

*Typically offered in Fall, Spring, and Summer*

**ARE 309 Environmental Law & Economic Policy** (3 credit hours)

Current federal and state environmental laws and regulations and their common law foundations. Relationship of the law and its regulatory mechanisms to economic policy issues: externalities, pollution taxes, incentives, permit trading, and cost-benefit analysis. Major environmental topics including water and wetlands, solid and hazardous wastes, pesticides, clean air, endangered species and nuisance actions. Overview of the legal system.

Prerequisite: ARE 201 or EC 201 or EC 205

*GEP Social Sciences*

*Typically offered in Fall and Summer*

**ARE 311 Agricultural Markets** (3 credit hours)

Agricultural marketing system and economic forces affecting its structure and efficiency. Public policy issues affecting agricultural markets. Emphasis on the analysis of current sources of agricultural market information. Marketing and storage problems over time; futures markets and the management of risk; transportation and international trade; government agricultural programs.

Prerequisite: ARE 201 or EC 201 or EC 205

*GEP Social Sciences*

*Typically offered in Fall only*

**ARE 312 Agribusiness Marketing** (3 credit hours)

Application of marketing and economic principles to decision making in contemporary agribusiness firms. Marketing strategies, marketing research and information, segmentation and targeting, marketing mix, and market plans within food, fiber, natural resource, and production input industries. Professional selling skills and knowledge. Off-campus field experience and visiting lecturers from the agribusiness industry.

Prerequisite: ARE 201 or EC 201 or EC 205

*Typically offered in Fall and Spring*

**ARE 313 Agricultural Financial Management** (3 credit hours)

Fundamental concepts for financial management decision in agricultural/farm businesses. Emphasis on financial statement analysis of profitability, efficiency, liquidity, repayment capacity, risk, leverage, growth. Capital budgeting, investment decisions, farmland bid price determination, farm real estate appraisal. Financial markets and credit institutions serving agriculture, lending policies, loan analysis, interest rate determination. Financial structure, performance, condition of farm sector.

Prerequisite: ARE 201 or EC 201 or EC 205

*Typically offered in Spring only*

**ARE 323 Agribusiness Finance** (3 credit hours)

ARE 323 teaches the history of monetary systems, the development of business finance tools and banking, and detailed creation and use of business financial statements, including Income Statements, Balance Sheets, and Statements of Cash Flow, within the context of the agribusiness industry. Two Finance courses are offered in the Agribusiness Management Major: ARE 321 - Agricultural Financial Management, which focuses on the history of finance in agriculture and financial planning for farmers and similar independent agricultural enterprises; and ARE 323 - Agribusiness Finance, which focuses on finance for larger agribusinesses and for managers of agribusiness divisions in larger organizations.

Prerequisites: (ARE 201 or EC 201) and (ACC 200 or ACC 210 or equivalent Introductory Accounting Course)

*Typically offered in Fall, Spring, and Summer*

**ARE 332 Human Resource Management for Agribusiness** (3 credit hours)

General introduction to human resource management in agribusinesses. Skills for agribusiness owners for efficient productivity from employees in a legal and ethical manner. Topics on labor economics, human resource legislation, employee planning and recruitment, and migrant labor issues. Emphasis on techniques for training, motivating, leading, and disciplining employees.

Prerequisite: ARE 201 or EC 201 or EC 205

*Typically offered in Fall, Spring, and Summer*

**ARE 336/EC 336 Introduction to Resource and Environmental Economics** (3 credit hours)

Application of basic economic tools to understand and evaluate environmental/resource policies. Concepts such as property rights, non-market goods, allocation over time, externalities, and public goods. Current policy issues such as global climate change, evaluating natural resource damages from oil spills, reducing the costs of regulations, protecting estuaries, and dealing with non-point source pollution.

Prerequisite: ARE 201 or EC 201 or EC 205

*GEP Interdisciplinary Perspectives*

*Typically offered in Fall, Spring, and Summer*

**ARE 345 Global Agribusiness Management** (3 credit hours)

Global trade is the largest growth area in American agribusiness, and knowledge of international agribusiness markets is one of the primary qualifications desired from college graduates entering the workforce. This course provides detailed knowledge of the six major regions for agribusiness trade worldwide, to prepare students to understand, speak intelligently about, and capitalize on opportunities for NC and US agribusiness products in the global marketplace. Students will be required to provide their own transportation to local markets and incidental expenses for meals representative of the six major regions connected with class assignments. Please see the Instructor for details.

Prerequisite: EC 201 or 205 or ARE 201

*GEP Global Knowledge*

*Typically offered in Spring only*

**ARE 370 Agribusiness New Venture Development** (3 credit hours)

Agribusiness New Venture Development is the second course of three in the Agribusiness Entrepreneurship course sequence. It teaches students how to develop a new venture idea into a business model. Students learn how to collect and interpret data needed to evaluate new businesses and to evaluate new ventures in existing businesses or institutions. Students develop actionable plans for start-up businesses or ventures. Student teams gain experience pitching their business models to prospective investors and partners. Students attend class at the NC State EClinic in HQ Raleigh for five classes and transportation is provided.

Prerequisite: ARE 270

*Typically offered in Fall and Spring*

**ARE 395 Special Topics in Agricultural and Resource Economics (300 level)** (1-6 credit hours)

An offering of new junior-level courses on trial basis with topics varying based on offerings. Repetition with different course content acceptable up to 4 times and total of 12 units.

*Typically offered in Fall, Spring, and Summer*

**ARE 404 Advanced Agribusiness Management** (3 credit hours)

An advanced course in business planning that integrates the risk and uncertainty associated with production, marketing, and financial management strategies of agribusiness firms. Focuses on the fundamental components required to develop a strategic business plan and design a viable business strategy in the context of the firm's market and its internal environment. Special attention is given to the application of economic theory and analysis to business decision-making processes. 80% of enrollment is restricted to Agricultural & Resource Economics students with the remaining 20% open for all other majors.

Prerequisite: (ARE 303 or ARE 304), ARE 321, and (ARE 311 or ARE 312)

**ARE 412 Advanced Agribusiness Marketing** (3 credit hours)

ARE provides opportunities for undergraduates to gain experience with the practical application of Marketing principles with real and fictitious Agribusiness products through two courses taken on campus: ARE 412 and ARE 413. These opportunities are provided to students that are specifically interested in pursuing a Marketing or Sales position after graduation, especially when an internship is not an option. The practical applications often require two semesters (one full academic year) to complete, so student involved in projects are encouraged to take ARE 412 in the Fall and ARE 413 in the Spring. Projects vary each year.

Prerequisite: ARE/EC 201 or EC 205; Pre- or Co-requisite: ARE 312 or BUS 360

*Typically offered in Spring only*

**ARE 413 Applied Agribusiness Marketing** (3 credit hours)

ARE provides opportunities for undergraduates to gain experience with the practical application of marketing principles with real and fictitious agribusiness products through two courses taken on campus, ARE 412 and ARE 413. These opportunities are provided to students that are specifically interested in pursuing a Marketing or Sales position after graduation, especially when an internship is not an option. The practical applications often require two semesters (one full academic year) to complete, so students involved in projects are encouraged to take ARE 412 in the Fall, and ARE 413 in the Spring. Projects vary each year. This course is an elective for ABM, BBM, and related CALS majors. Departmental approval required to enroll in course.

Prerequisite: ARE 201/EC 201 or EC 205, ARE 312, ARE 412

*Typically offered in Spring only*

**ARE 415/ARE 515 Introduction to Commodity Futures Markets** (3 credit hours)

This course introduces futures and options for commodity markets. The first half of the course focuses on the mechanics and economic functions of these markets. The second half of the course covers the application of futures and options as a tool for risk management. Most examples and instruction materials are based on agricultural commodities, though some natural resource and financial derivatives will also be covered.

Prerequisites: ARE 201 or EC 201 or EC 205 or equivalent

*Typically offered in Fall only*

*This course is offered alternate even years*

**ARE 420 Taxation in Agriculture, Production, and Agribusiness** (3 credit hours)

Students will explore the effect of various tax obligations on farms and rural agribusinesses. Topics of discussion include income taxation, both federal and state, Social Security taxation, property taxation, sales and use taxation, and estate and gift taxation.

Prerequisites: ARE 215 or ARE 303 or ARE 304 or ARE 321

*Typically offered in Spring only*

*This course is offered alternate even years*

**ARE 425 Contracts and Organizations in Agriculture** (3 credit hours)

This course deals with agricultural contracts and organizational structures in agriculture and food industries. The covered material relies on the economic theory to explain observed empirical phenomena.

The approach also relies on the use case studies of different contractual arrangements observed in the U.S. agriculture. The content delivery consists of instructor's lectures, guest lectures and students' presentations. Grading is based on exams, presentations and a class project.

Prerequisite: ARE/EC 301 or equivalent or instructor's permission

*Typically offered in Fall only*

**ARE 433 U.S. Agricultural Policy** (3 credit hours)

Government economic policies and programs affecting agricultural inputs and farm products. Analysis of the rationale, objectives, and major types of agricultural programs and their effects on resource allocation and income distribution within agriculture and between agriculture and the rest of the economy.

Prerequisite: ARE(EC) 301

*GEP Social Sciences*

*Typically offered in Fall and Spring*

**ARE 444 Ethics in Agribusiness** (3 credit hours)

Ethical behavior is a crucial issue in American business, especially after numerous ethical lapses over the past decade, and for agribusiness given claims of marketing unhealthy foods, development of genetically-modified organisms, hiring of undocumented workers, and consolidation into industrial production facilities. Students are taught ethical theories and frameworks, used to discuss general ethical questions such as death, theft, and lying, followed by the more specific agribusiness issues mentioned above. Students will formulate their own opinions about these issues, recognize and understand the opinions of others, and be able to accurately and adequately communicate those opinions.

*Typically offered in Fall and Spring*

**ARE 448 International Agricultural Trade** (3 credit hours)

Study of the economic forces that drive international trade in agriculture, food, and natural resources. Economic principles, analytical techniques, and empirical analysis are used to explain international trade and foreign direct investment in the global marketplace.

Prerequisites: ARE 201 or EC 201 or EC 205 or equivalent.

*Typically offered in Fall and Summer*



**ARE 455 Agribusiness Analytics** (3 credit hours)

Agribusiness Analytics provides an overview and involved application of analysis and common analytical methods in the agricultural industry. Emphasis on methods to predict, evaluate, and otherwise inform agribusiness decision makers.

Prerequisites: ST/BUS 350 or ST 311

*Typically offered in Spring only*

**ARE 470 Agribusiness Entrepreneurship Clinical Skills Development** (3 credit hours)

Agribusiness Entrepreneurship Clinical Skills Development is the third of three courses in the Agribusiness Entrepreneurship course sequence. This course teaches students the clinical skills needed to analyze questions faced by startups and other companies as they pursue opportunities in agribusiness. Students provide counseling to agribusiness developers in exchange for experience and an opportunity to build their business networks. Students will create and execute action plans with partner companies, conduct research, and develop a written analysis and recommendations for specific questions posed by the companies.

Prerequisite: ARE 270 and ARE 370

*Typically offered in Fall and Spring*

**ARE 475 Food Policy** (3 credit hours)

This course will provide students a theoretical basis and empirical tools to examine U.S. federal, state, and local food policies. Applications covered will explore contemporary food policy issues such as nutrition assistance programs; regulations governing food safety, food transport and food trade; alternatives to the conventional food system (i.e. local foods, urban farming); health and nutritional labeling and claims; and the quickly evolving policy and legal environment affecting food adulteration, food fraud, and national food defense.

Prerequisites: ARE 301 or EC 301

*Typically offered in Fall, Spring, and Summer*

**ARE 490 Career Seminar in Agriculture & Resource Economics** (1 credit hours)

Planning and preparing for career choices. Resume writing, networking, interviewing, personality characteristics, and job searching. Visits with employer representatives. Employer expectations and career opportunities. Researching firms and employment opportunities. Oral and written presentations.

Prerequisite: Sophomore standing

*Typically offered in Fall and Spring*

**ARE 492 External Learning Experience** (1-6 credit hours)

A learning experience in agriculture and life sciences within an academic framework that utilizes facilities and resources which are external to the campus. Contact and arrangements with prospective employers must be initiated by student and approved by a faculty adviser, the prospective employer, the departmental teaching coordinator and the academic dean prior to the experience.

Prerequisite: Sophomore standing

*Typically offered in Fall, Spring, and Summer*

**ARE 493 Special Problems/Research Exploration** (1-6 credit hours)

A learning experience in agriculture and life sciences within an academic framework that utilizes campus facilities and resources. Contact and arrangements with prospective employers must be initiated by student and approved by a faculty adviser, the prospective employer, the departmental teaching coordinator and the academic dean prior to the experience. Individualized/Independent Study and Research courses require a Course Agreement for Students Enrolled in Non-Standard Courses be completed by the student and faculty member prior to registration by the department.

Prerequisite: ARE Sophomore standing

*Typically offered in Fall and Spring*

**ARE 494 Agribusiness Study Abroad** (1-6 credit hours)

Global trade is the largest growth area in American agribusiness, and knowledge of international agribusiness markets is a primary qualification desired from college graduates entering the workforce. This course addresses these issues by providing opportunities for students to study abroad in various locations around the world, with different destinations offered each academic year. Credit hours are variable based on length of travel and classroom instruction pre-and post-travel consistent with NCSU policies and practices. Course may be repeated for credit to visit different destinations only. Significant expenses for travel are involved. Please see the instructor for specific program details.

*GEP Global Knowledge*

*Typically offered in Spring only*

**ARE 495 Special Topics in Agricultural and Resource Economics** (1-6 credit hours)

Presentation of material not normally available in regular course offerings or offering of new courses on a trial basis.

**ARE 515/ARE 415 Introduction to Commodity Futures Markets** (3 credit hours)

This course introduces futures and options for commodity markets. The first half of the course focuses on the mechanics and economic functions of these markets. The second half of the course covers the application of futures and options as a tool for risk management. Most examples and instruction materials are based on agricultural commodities, though some natural resource and financial derivatives will also be covered.

Prerequisites: ARE 201 or EC 201 or EC 205 or equivalent

*Typically offered in Fall only*

*This course is offered alternate even years*

**ARE 590 Special Topics in ARE** (1-99 credit hours)

Special Topics in ARE