Department of Agricultural and Resource Economics

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Professor Gregory M. Perry, Head
Professor Dana Hoag, Undergraduate Coordinator
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Undergraduate Majors
- Agricultural Business
  - Agricultural Economics Concentration
  - Farm and Ranch Management Concentration
- Agricultural Education
  - Teacher Development Concentration
  - Agricultural Literacy Concentration
- Environmental and Natural Resource Economics

Minor
- Agricultural Literacy
- Agricultural and Resource Economics

Graduate

Graduate Programs in Agricultural and Resource Economics
The department offers graduate programs leading to Master of Science and Doctor of Philosophy degrees. A description of these programs may be found in the Graduate and Professional Bulletin or on the department’s website (http://dare.agsci.colostate.edu).

Master Programs
- Master of Science in Agricultural and Resource Economics, Plan A
- Master of Science in Agricultural and Resource Economics, Plan B

Ph.D.
- Ph.D. in Agricultural and Resource Economics

Courses
Subjects in this department include: Agricultural and Resource Economics (AREC) and Agricultural Education (AGED).

Agricultural and Resource Economics (AREC)

AREC 202 Agricultural and Resource Economics (GT-SS1) Credits: 3 (3-0-0)
Course Description: Introduction to decision-making by consumers, firms, and government and the resulting allocation of resources through markets.
Prerequisite: MATH 117, may be taken concurrently or MATH 118 or MATH 124 or MATH 125 or MATH 141 or MATH 155 or MATH 159 or MATH 160.
Registration Information: Credit not allowed for both AREC 202 and ECON 202.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.
Additional Information: Social & Behavioral Sciences 3C, Economic or Political Systems (GT-SS1).

AREC 224 Introduction to Agribusiness Entrepreneurship Credit: 1 (0-0-1)
Course Description: Introductory exposure to entrepreneurship for agribusinesses through presentations by industry professionals.
Prerequisite: AREC 202, may be taken concurrently or ECON 202, may be taken concurrently.
Registration Information: Required field trips. Sections may be offered: Online.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: Yes.

AREC 240 Issues in Environmental Economics (GT-SS1) Credits: 3 (3-0-0)
Also Offered As: ECON 240.
Course Description: Discussion and economic analysis of current environmental issues with special emphasis on the impact of economic growth.
Prerequisite: None.
Registration Information: Credit not allowed for both AREC 240 and ECON 240.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.
Additional Information: Social & Behavioral Sciences 3C, Economic or Political Systems (GT-SS1).
AERC 310 Agricultural Marketing Credits: 3 (3-0-0)
Course Description: Market structure, behavior, and performance including futures market and market games theory.
Prerequisite: AREC 202 or ECON 202.
Registration Information: Sections may be offered: Online.
Terms Offered: Fall, Spring.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

AERC 311 Agricultural and Resource Product Marketing Credits: 3 (3-0-0)
Course Description: Theory and practice of marketing-differentiated agricultural products and natural resource amenities with focus on strategies and market trends.
Prerequisite: AREC 202 or ECON 202.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AERC 320 Personnel Management in Agriculture Credits: 3 (3-0-0)
Course Description: Human resource issues for agribusiness firms. Managing employees, legal issues, negotiation methods, and benefits packages. Workplace professionalism.
Prerequisite: AREC 202 or ECON 202.
Restriction: .
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AERC 325 Small Agribusiness Management Credits: 3 (3-0-0)
Course Description: Apply business principles to small agribusinesses and cooperatives.
Prerequisite: AREC 202 or ECON 202.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AERC 330 Introduction to Econometrics Credits: 3 (3-0-0)
Also Offered As: ECON 335.
Course Description: Estimating statistical regression models of economic relationships; treatment of special problems that may arise in analysis of economic data.
Prerequisites: (ECON 204) and (MATH 141 or MATH 155 or MATH 160) and (STAT 201 or STAT 204 or STAT 301 or STAT 307 or ERHS 307).
Registration Information: Credit not allowed for both AERC 335 and ECON 335.
Terms Offered: Fall, Spring.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

AERC 335 Economic of Outdoor Recreation Credits: 3 (3-0-0)
Also Offered As: ECON 346.
Course Description: Benefit cost framework in public planning for outdoor recreation, pricing problems, projecting demand, and regional economic development.
Prerequisite: AREC 202 or ECON 202.
Registration Information: Credit not allowed for both AERC 346 and ECON 346.
Term Offered: Fall.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

AERC 341 Environmental Economics Credits: 3 (3-0-0)
Course Description: Economic theories and analytic frameworks are developed and applied to contemporary problems of the use and protection of the natural environment.
Prerequisites: (AREC 202 or ECON 202) and (AREC 240 or ECON 240).
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AERC 342 Water Law, Policy, and Institutions Credits: 3 (3-0-0)
Course Description: Legal water issues within the context of historical, social and economic development with emphasis on the southwestern United States.
Prerequisite: None.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AERC 346 Economics of Outdoor Recreation Credits: 3 (3-0-0)
Also Offered As: ECON 346.
Course Description: Benefit cost framework in public planning for outdoor recreation, pricing problems, projecting demand, and regional economic development.
Prerequisite: AREC 202 or ECON 202.
Registration Information: Credit not allowed for both AERC 346 and ECON 346.
Term Offered: Fall.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

AERC 347 Agricultural Law Credits: 3 (3-0-0)
Course Description: Laws, regulations, case decisions affecting ranching and farming in the Rocky Mountain area.
Prerequisite: None.
Restriction: Must be a: Junior.
Term Offered: Fall.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

AERC 348 Introduction to Environmental Economics Credits: 3 (3-0-0)
Course Description: Design and measurement of economic values and environmental policy; how the theory can be used to construct solutions to real-world problems.
Prerequisites: (AREC 202 or ECON 202) and (MATH 118 or MATH 124 or MATH 125 or MATH 126 or MATH 141 or MATH 155 or MATH 160).
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.
AREC 405 Agricultural Production Management  Credits: 3 (2-2-0)  
Course Description: Economic principles of agricultural production decisions with linear programming analysis of production choices and farm planning.  
Prerequisite: AREC 305.  
Registration Information: Must register for lecture and laboratory.  
Term Offered: Spring.  
Grade Modes: S/U within Student Option, Trad within Student Option.  
Special Course Fee: No.

AREC 408 Agricultural Finance Credits: 3 (3-0-0)  
Course Description: Monetary affairs of agribusiness and agricultural production emphasizing credit institutions and procurement, investment, and management.  
Prerequisite: AREC 305.  
Term Offered: Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.

AREC 412 Agricultural Commodities Marketing Credits: 3 (3-0-0)  
Course Description: Agricultural marketing and agribusiness principles applied to current marketing problems relating to livestock and field and horticultural crops.  
Prerequisite: AREC 310.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: Yes.

AREC 415 International Agricultural Trade Credits: 3 (3-0-0)  
Course Description: Agricultural trade patterns and institutions; trade theory with applications to agriculture. Current issues in agricultural trade.  
Prerequisites: AREC 310 and ECON 204.  
Term Offered: Fall.  
Grade Modes: S/U within Student Option, Trad within Student Option.  
Special Course Fee: No.

AREC 428 Agricultural Business Management Credits: 3 (3-0-0)  
Course Description: Economic analysis, organization, and management practices of agriculture and food industries studied through simulation, case study, computer labs.  
Prerequisites: AREC 305 and AREC 310.  
Terms Offered: Fall, Spring.  
Grade Modes: S/U within Student Option, Trad within Student Option.  
Special Course Fee: No.

AREC 440 Advanced Environmental and Resource Economics Credits: 3 (3-0-0)  
Course Description: Microeconomic techniques to rigorously explore economic decision-making and policy as they apply to environmental and natural resource problems.  
Prerequisites: (AREC 340 or ECON 340) and (AREC 341 and ECON 306).  
Term Offered: Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.

AREC 442 Water Resource Economics Credits: 3 (3-0-0)  
Course Description: An in-depth exploration of the role of economics in water resource planning.  
Prerequisites: AREC 342 and ECON 306, may be taken concurrently.  
Registration Information: Credit not allowed for both AREC 442 and AREC 542.  
Term Offered: Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.

AREC 452 Real Estate Appraisal Principles Credits: 2 (2-0-0)  
Also Offered As: REL 452.  
Course Description: Theoretical principles that underlie real estate appraisal methods.  
Prerequisites: (AREC 202 or ECON 202) and (AREC 305 or REL 360).  
Registration Information: Credit not allowed for both AREC 452 and REL 452.  
Term Offered: Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.

AREC 453 Real Estate Appraisal Practices Credits: 2 (2-0-0)  
Also Offered As: REL 453.  
Course Description: Procedures and practices used in real estate appraisal.  
Prerequisite: AREC 452, may be taken concurrently or REL 452.  
Registration Information: Credit not allowed for both AREC 453 and REL 453.  
Term Offered: Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.

AREC 460 Ag- and Resource-Based Economic Development Credits: 3 (3-0-0)  
Course Description: Indicators, tools and approaches for agriculture- and natural resource-based economic development in resource dependent countries and communities.  
Prerequisite: ECON 306.  
Term Offered: Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.

AREC 478 Agricultural Policy Credits: 3 (3-0-0)  
Course Description: Formulation and administration of public policies affecting agricultural industries and rural areas in the United States.  
Prerequisite: AREC 202 or ECON 202 or AREC 240 or ECON 240.  
Terms Offered: Fall, Spring.  
Grade Modes: S/U within Student Option, Trad within Student Option.  
Special Course Fee: No.

AREC 480A1 Agriculture Trade Credits: 3 (0-0-3)  
Course Description: Current issues in agriculture trade, patterns of trade across developed and developing countries, trade laws, trading blocks and partners.  
Prerequisite: AREC 310.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: No.
AREC 484 Supervised College Teaching  Credits: Var[1-5]
Course Description: 
Prerequisite: None.
Registration Information: Credit not allowed for both AREC 484 and ECON 484.
Term Offered: Fall, Spring.
Grade Mode: Instructor Option.
Special Course Fee: No.

AREC 487 Internship  Credits: Var[1-6]
Course Description: 
Prerequisite: None.
Registration Information: May be taken for a maximum of 6 credits.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

AREC 495 Independent Study  Credits: Var[1-6]
Course Description: 
Prerequisite: None.
Registration Information: May be taken for a maximum of 6 credits.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

AREC 496 Group Study  Credits: Var[1-18]
Course Description: 
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

AREC 505 Agricultural Production Economics  Credits: 3 (3-0-0)
Course Description: Empirical applications of production economic theory for use of inputs and allocation of resources in agricultural, natural resource sectors.
Prerequisites: (MATH 141) and (AREC 405 or ECON 306).
Term Offered: Fall.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

AREC 506 Applied Microeconomic Theory  Credits: 3 (3-0-0)
Also Offered As: ECON 506.
Course Description: Introduction to mathematical models in modern microeconomics, including choices and demand, production and supply, and market structures and failures.
Prerequisite: ECON 306.
Registration Information: Credit not allowed for both AREC 506 and ECON 506.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 507 Applied Welfare and Policy Analysis  Credits: 3 (3-0-0)
Course Description: How policies are crafted to effectively address social issues, especially for agriculture and the environment, and how they impact society.
Prerequisite: ECON 306.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 508 Financial Management in Agriculture  Credits: 2 (2-0-0)
Course Description: Systematic approach to understanding and applying financial management in farm businesses.
Prerequisites: (AREC 408 or FIN 305) and (ECON 306).
Term Offered: Fall (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

AREC 510 Agricultural Product Marketing  Credits: 3 (3-0-0)
Course Description: Marketing techniques, industrial organization/competition for agricultural products in US domestic, international trade, and developing country markets.
Prerequisites: (AREC 310) and (AREC 335 or ECON 335).
Term Offered: Fall.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

AREC 530 Agricultural Price Analysis  Credits: 3 (3-0-0)
Course Description: Agricultural commodity prices related to neoclassical economics; current literature emphasizing management problems.
Prerequisite: None.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 535 Applied Econometrics  Credits: 3 (3-0-0)
Also Offered As: ECON 535.
Course Description: Econometric techniques applied to testing and quantification of theoretical economic relationships drawn from both microeconomics, macroeconomics.
Prerequisites: (AREC 335 or ECON 335) and (ECON 304 or ECON 306).
Registration Information: Credit not allowed for both AREC 535 and ECON 535.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 540 Environmental and Natural Resource Economics  Credits: 3 (3-0-0)
Also Offered As: ECON 540.
Course Description: Theory, methods, and policy in environmental and natural resource economics.
Prerequisite: AREC 506 or ECON 506.
Registration Information: Credit not allowed for both AREC 540 and ECON 540.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 541 Environmental Economics  Credits: 3 (3-0-0)
Also Offered As: ECON 541.
Course Description: Economics of environmental policy; partial equilibrium and general equilibrium model; pollution; natural environments; population and economic growth.
Prerequisite: ECON 306.
Registration Information: Credit not allowed for both AREC 541 and ECON 541.
Term Offered: Spring.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.
AREC 542  Applied Advanced Water Resource Economics  Credits: 3 (3-0-0)
Course Description: Theory and application of economics in water resource planning.
Prerequisites: (ECON 306 and AREC 342 and STAT 301) and (MATH 141 or MATH 155 or MATH 160).
Registration Information: Credit not allowed for both AREC 542 and AREC 442.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 547  Public Lands Planning and Management  Credits: 3 (3-0-0)
Course Description: Principles and techniques used by federal land management agencies including Forest Service, Park Service, Fish and Wildlife Service, and BLM.
Prerequisite: AREC 202 or ECON 202.
Term Offered: Spring (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

AREC 563  Regional Economics-Theory, Methods, and Issues Credits: 3 (3-0-0)
Also Offered As: ECON 563.
Course Description: Tools and methods of regional economics, including supply, demand, and externality analysis. Applications to current urban and regional policy issues.
Prerequisites: ECON 306 and ECON 501, may be taken concurrently.
Registration Information: Credit not allowed for both AREC 563 and ECON 563.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 566  Contemporary Issues in Developing Countries  Credits: 3 (3-0-0)
Also Offered As: SOC 566.
Course Description: Social, economic, and technological factors in developing countries.
Prerequisite: None.
Registration Information: Credit not allowed for both AREC 566 and SOC 566.
Term Offered: Spring (odd years).
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

AREC 570  Methodology of Economic Research Credits: 3 (3-0-0)
Also Offered As: ECON 530.
Course Description: Philosophical foundations of science and research. Concepts and skills for planning, performing, reporting, and evaluating economic research.
Prerequisites: ECON 304 and ECON 306.
Registration Information: Credit not allowed for both AREC 570 and ECON 530.
Term Offered: Fall (even years).
Grade Mode: Traditional.
Special Course Fee: No.

AREC 572  Social Benefit Cost Analysis Credits: 3 (3-0-0)
Course Description: Theory, application of concepts relating to social benefit cost analysis of public projects, policies intended to promote social welfare, economic growth.
Prerequisite: ECON 306.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 605  Agricultural Production and Cost Analysis Credits: 2 (2-0-0)
Course Description: Empirical application and analysis of production and cost issues in the agricultural and natural resource sectors.
Prerequisites: (AREC 506) and (AREC 535 or ECON 535).
Restriction: Must be a: Graduate, Professional.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 606  Microeconomic Analysis I Credits: 3 (3-0-0)
Also Offered As: ECON 606.
Course Description: Advanced price/allocation theory: consumer/producer decisions; uncertainty; market structure; partial/general equilibrium; efficiency/welfare.
Prerequisites: ECON 306 and ECON 501.
Restriction: Must be a: Graduate, Professional.
Registration Information: Credit not allowed for both AREC 606 and ECON 606.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 610  Agricultural Marketing and Demand Analysis Credits: 2 (2-0-0)
Course Description: Empirical application and analysis of agricultural marketing and demand issues in the agricultural and natural resource sectors.
Prerequisites: (AREC 506) and (AREC 535 or ECON 535).
Restriction: Must be a: Graduate, Professional.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 615  Optimization Methods for Applied Economics Credits: 3 (3-0-0)
Course Description: Theory and practice of optimization techniques used in economic applications with emphasis on linear and nonlinear programming.
Prerequisite: AREC 506.
Restriction: Must be a: Graduate, Professional.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.
AREC 635 Econometric Theory I Credits: 3 (3-0-0)
Also Offered As: ECON 635.
Course Description: Theory of mathematical statistics and classical linear regression model in context of economic application.
Prerequisites: (AREC 535 or ECON 535) and (ECON 501, may be taken concurrently).
Restriction: Must be a: Graduate, Professional.
Registration Information: Credit not allowed for both AREC 635 and ECON 635.
Term Offered: Fall.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

AREC 647 Land Use Economics and Spatial Modeling Credits: 3 (3-0-0)
Course Description: Use of spatial data in economic analysis of land use focusing on development patterns, land conservation, spatial externalities and agricultural land.
Prerequisites: (AREC 506 or ECON 506) and (AREC 535 or ECON 535).
Restriction: Must be a: Graduate, Professional.
Term Offered: Fall (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

AREC 660 Development of Rural Resource-Based Economies Credits: 3 (3-0-0)
Course Description: Economic literature-based exploration of human welfare measures and implications of approaches to agriculture and resource-based economic development.
Prerequisite: AREC 506.
Restriction: Must be a: Graduate, Professional.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 678 Agricultural and Resource Policy Credits: 3 (3-0-0)
Course Description: Evaluate and analyze economic theory, applications and public incentives related to government policies for agriculture and natural resources.
Prerequisite: AREC 506.
Restriction: Must be a: Graduate, Professional.
Term Offered: Fall.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

AREC 695 Independent Study Credits: Var[1-6]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

AREC 699 Thesis Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

AREC 705 Advanced Production and Technological Change Credits: 2 (2-0-0)
Also Offered As: ECON 705.
Course Description: Production theory is applied to real-world issues including risk, innovation, and environment, through lectures and readings of current literature.
Prerequisite: AREC 605.
Restriction: Must be a: Graduate, Professional.
Term Offered: Spring (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

AREC 706 Microeconomic Analysis II Credits: 3 (3-0-0)
Also Offered As: ECON 706.
Course Description: Advanced topics in microtheory: game theory; market imperfections; adverse selection; principal-agent problems; social choice theory; incentives, etc.
Prerequisite: ECON 606.
Restriction: Must be a: Graduate, Professional.
Registration Information: Credit not allowed for both AREC 706 and ECON 706.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 710 Advanced Agricultural Marketing Issues Credits: 2 (2-0-0)
Course Description: Theoretical and modeling issues of consumer demand, market structure, product differentiation and market behavior.
Prerequisites: (ECON 706, may be taken concurrently) and (AREC 735 or ECON 735).
Restriction: Must be a: Graduate, Professional.
Term Offered: Spring (odd years).
Grade Mode: Traditional.

AREC 735 Econometric Theory II Credits: 2 (2-0-0)
Also Offered As: ECON 735.
Course Description: Econometrics models and estimators in econometrics, from fully parametric to semiparametric and nonparametric approaches.
Prerequisite: AREC 635 or ECON 635.
Restriction: Must be a: Graduate, Professional.
Registration Information: Credit not allowed for both AREC 735 and ECON 735. This is a partial-semester course.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 736A Advanced Econometric Methods: Discrete Choice Models Credit: 1 (1-0-0)
Also Offered As: ECON 736A.
Course Description: Econometrics analysis of: Discrete Choice Models.
Prerequisite: AREC 735, may be taken concurrently or ECON 735, may be taken concurrently.
Restriction: Must be a: Graduate, Professional.
Registration Information: Credit not allowed for both AREC 736A-C and ECON 736A-C. This is a partial-semester course.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.
AREC 736B  Advanced Econometric Methods: Panel Data
Course Description: Econometrics analysis of: Panel Data Models.
Prerequisite: AREC 735, may be taken concurrently or ECON 735, may be taken concurrently.
Restriction: Must be a: Graduate, Professional.
Registration Information: Credit not allowed for both AREC 736A-C and ECON 736A-C. This is a partial-semester course.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 736C  Advanced Econometric Methods: Time Series
Course Description: Econometrics analysis of: Time Series Models.
Prerequisite: AREC 735, may be taken concurrently or ECON 735, may be taken concurrently.
Restriction: Must be a: Graduate, Professional.
Registration Information: Credit not allowed for both AREC 736A-C and ECON 736A-C. This is a partial-semester course.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 740  Advanced Natural Resource Economics  Credits: 3 (3-0-0)
Also Offered As: ECON 740.
Course Description: Advanced theory, methods, and literature in natural resource economics, including dynamic programming and optimal control.
Prerequisite: AREC 706 or ECON 706.
Restriction: Must be a: Graduate, Professional.
Registration Information: Credit not allowed for both AREC 740 and ECON 740.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 741  Advanced Environmental Economics  Credits: 3 (3-0-0)
Also Offered As: ECON 741.
Course Description: Advanced theory, methods, and literature in environmental economics.
Prerequisite: AREC 706 or ECON 706.
Restriction: Must be a: Graduate, Professional.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AREC 770  Advanced Methods in Applied Economics  Credits: 3 (3-0-0)
Course Description: Advanced research methods in applied economics: lab and field experiments, non-market valuation and discrete choice experiments.
Prerequisites: (AREC 706, may be taken concurrently or ECON 706, may be taken concurrently) and (AREC 735 or ECON 735).
Restriction: Must be a: Graduate, Professional.
Term Offered: Fall (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

AREC 784  Supervised College Teaching  Credits: Var[1-3]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

AREC 792A  Seminar: Agricultural  Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

AREC 792B  Seminar: International  Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

AREC 792C  Seminar: Resources  Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

AREC 795  Independent Study  Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

AREC 799  Dissertation  Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

Agricultural Education (AGED)
AGED 110  Agriculture Production Systems  Credits: 3 (2-3-0)
Course Description: Broad survey of the diverse aspects of Colorado agriculture.
Prerequisite: None.
Registration Information: Required field trips.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: Yes.
AGED 210  History of Agriculture in the United States  Credits: 3 (3-0-0)
Course Description: Relationships in agriculture. Historical/Native American/early practices, industrial agriculture, technologies, philosophy, green revolution.
Prerequisite: CO 150.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.
Additional Information: Historical Perspectives 3D.

AGED 220  Understanding Agricultural Education  Credit: 1 (1-0-0)
Course Description: Understanding different agricultural education systems. Understanding delivery models of agricultural education programs.
Prerequisite: None.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AGED 240  Technical Tool Applications in Ag Education  Credits: 2 (1-3-0)
Course Description: Development of safe competencies and applications related to power and technical tools utilized in school-based agricultural education programs.
Prerequisite: None.
Registration Information: Must register for lecture and lab.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: Yes.

AGED 241  Plumbing and Electrical Applications in Ag Ed  Credit: 1 (1-0-0)
Course Description: Development of competencies and theory related to plumbing and electrical applications utilized in school-based agricultural education programs.
Prerequisite: None.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: Yes.

AGED 244  Power Systems in Agricultural Education  Credit: 1 (1-0-0)
Course Description: Development of competencies and theory related to agricultural power systems utilized in school-based agricultural education programs.
Prerequisite: None.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: Yes.

AGED 320  Technology Lab for Ag Education  Credit: 1 (0-3-0)
Course Description: Laboratory applications related to the power, structure, and technical systems pathway utilized in school-based agricultural education programs.
Prerequisite: AGED 240, may be taken concurrently or AGED 241, may be taken concurrently or AGED 244, may be taken concurrently.
Registration Information: May be taken twice for credit.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: Yes.

AGED 330  Program Design and Evaluation in Ag. Literacy  Credits: 3 (3-0-0)
Course Description: Design and evaluate programs in agricultural literacy using experiential methods.
Prerequisite: AGED 220.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: Yes.

AGED 420  Developing School-Based Ag Education Programs  Credits: 3 (3-0-0)
Course Description: Developing knowledge in the approach and delivery of school-based agricultural education programs.
Prerequisite: AGED 220.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: Yes.

AGED 430  Methods of Agricultural Literacy  Credits: 3 (3-0-0)
Course Description: Prepare and conduct agricultural literacy instructional units to work with a variety of audiences and instructional topics.
Prerequisite: AGED 330.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: Yes.

AGED 486  Practicum  Credits: Var[2-6]
Course Description: Supervised work experience in approved agricultural education setting with periodic consultation of faculty.
Prerequisite: AGED 220.
Registration Information: Written consent of instructor.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

AGED 487  Internship  Credits: Var[1-6]
Course Description: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

AGED 495  Independent Study  Credits: Var[1-6]
Course Description: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

AGED 496  Group Study  Credits: Var[1-12]
Course Description: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.
AGED 540 Ag Ed Laboratory Management and Safety  Credits:  
2 (2-0-0)

Course Description: Theory, management, and pedagogy of delivering safety instruction and experiential curriculum in secondary agricultural education laboratory settings.

Prerequisite: EDCT 420.

Restriction: .

Terms Offered: Fall, Summer.

Grade Mode: Traditional.

Special Course Fee: No.