

# AGRICULTURAL ECONOMICS (AECN)

## AECN 801 Advanced Farm Management and Linear Programming

**Crosslisted with:** AECN 401

**Prerequisites:** AECN 201.

**Description:** The role of budgeting and linear programming in analyzing farm organization problems, theory of linear programming, linear program design, and analysis of linear programmed solutions to farm organization problems. Includes goal programming, multiple objective programming, risk programming, and financial modeling.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

## AECN 804 Agricultural Law

**Description:** Legal problems and issues of unique importance to lawyers serving the agricultural sector. Representative topics include economic and environmental regulation of agriculture; organizing the farm business; financing agricultural production; marketing agricultural products; and managing agricultural risk.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

## AECN 812 Organization and Performance of Agricultural Markets

**Description:** Economic theory of industrial organization and performance applied to agricultural input, raw product, and processed product markets. Buyer market power at first-handler level, spatial markets, vertical integration and contract coordination, and organizational forms unique to agriculture.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

**Prerequisite for:** AECN 901B

## AECN 814 Agricultural Price Analysis

**Description:** Economic relationships among the forces that determine the demand, supply and prices for agricultural commodities, products, and factors of production within and across markets. Theoretical foundations reviewed covering individual consumer demand, commodity and factor markets and price determination. Empirical methods applied in analyzing demand, supply and prices, and the factors affecting them. Multiple projects, including interpreting the results, to reinforce understanding of economic behavior.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

## AECN 815 Analytical Methods in Economics and Business

**Crosslisted with:** ECON 815

**Prerequisites:** MATH 104 or 106

**Description:** Equilibrium Analysis: Applications in business, finance, and economics. Market equilibria, accumulations, and economics. Optimization: profit, cost, and utility functions. Constrained optimization problems with utility functions. Constrained optimization problems in production and consumer allocations; Kuhn and Tucker conditions; static and dynamic input-output Models.

**Credit Hours:** 1-4

**Min credits per semester:** 1

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Grade Pass/No Pass Option

## AECN 818 Behavioral and Experimental Economics

**Prerequisites:** AECN 873

**Description:** Provides exposure to the related fields of behavioral and experimental economics through lectures and lab-based instruction.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Grade Pass/No Pass Option

**Offered:** SPRING

## AECN 821 Orientation to Research

**Description:** Introduction to approaches to agricultural economics research. Critical evaluation of agricultural economics literature. Identify an area of research interest and present a review of current literature in the area.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Grade Pass/No Pass Option

## AECN 827A Static Optimization with Mathematical Programming

**Description:** Optimization methods in economics, organized into modules, each of which introduces the fundamental methods used in the analysis of a particular class of economic problems. Each module is taught within the framework of consumer, firm, or social welfare optimization problems.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Grade Pass/No Pass Option

## AECN 832 Economics of Agricultural Production

**Prerequisites:** AECN 201, ECON 373, MATH 104

**Description:** Static economic analysis of multi-variant agriculture response functions. Resource and enterprise choice, cost functions, resource evaluation, and size and scale economies.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

**AECN 840 Applied Welfare Economics and Public Policy****Prerequisites:** AECN/ECON 873

**Description:** Principles of welfare economics applied to policy issues in agriculture and natural resources. Review of measures of household welfare, willingness to pay, and notions of Pareto optimality, aggregate welfare and market failure. Practical methods of comparative statics analysis of the effect of public policies on consumer and firm behavior, and on market equilibrium. Theory of externalities and welfare implications of market versus non-market allocation of public goods examined. Applications include evaluation of such policies as taxes, price supports, quotas, pollution controls, environmental damage liability, and intellectual property rights.

**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Grade Pass/No Pass Option**AECN 852 Agricultural Finance****Crosslisted with:** AECN 452**Prerequisites:** AECN 201 or 4 hrs accounting.

**Description:** Principles and concepts of financial management of farm and agribusiness firms developed. Various strategies for acquiring and using capital resources by the individual firm explored. Institutions providing the sources of agricultural credit are individually studied.

**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Grade Pass/No Pass Option**Prerequisite for:** AECN 416**AECN 856 Environmental Law****Crosslisted with:** AECN 456, NREE 456**Prerequisites:** Senior standing.**Notes:** Available through Online and Distance Education.

**Description:** Principles of law involved in environmental issues, externalities and market failures, public health, environmental litigation, and legislation. Environmental issues are related to statutory, administrative, and regulatory authorities.

**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Grade Pass/No Pass Option**AECN 857 Water Law****Crosslisted with:** AECN 457, NREE 457**Prerequisites:** AECN/NREE 357.

**Description:** Environmental impact review; public trust doctrine; endangered species; land use controls; wetlands regulation; surface and ground water rights; Indian and federal water rights; impact of water quality regulations on water allocation.

**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Grade Pass/No Pass Option**AECN 865 Resource and Environmental Economics II****Crosslisted with:** AECN 465, NREE 465**Prerequisites:** MATH 104 and one course in statistics.

**Description:** Application of resource economics concepts and empirical tools to resource management problems. Public policy issues involving environmental quality, land and water management.

**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Grade Pass/No Pass Option**Prerequisite for:** AECN 868**AECN 868 Advanced Resource and Environmental Economics****Prerequisites:** AECN/ECON 873, AECN 865, ECON 817

**Description:** Application of conceptual and empirical tools for analyzing resource problems. Both public and private dimensions of resource management are considered with emphasis on public policy. Economics of environmental quality, management of exhaustible and renewable resources, valuation of non-market goods and key elements of environmental policy analysis.

**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Grade Pass/No Pass Option**AECN 872 Mathematical Tools for Applied Economics**

**Description:** Designed for incoming MS students in Agricultural Economics and related fields. Topics include constrained and unconstrained optimization, Kuhn Tucker conditions, matrices and determinants, and mathematical statistics.

**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded**Offered:** FALL**AECN 873 Microeconomic Models and Applications****Crosslisted with:** ECON 873

**Notes:** Prerequisites: ECON 311, 312 and Math 104 or Math 106 or equivalent, or permission of instructor

**Description:** Analysis of microeconomic decision-making by individuals and firms with emphasis on consumer demand, production, cost and profit, market structure and the economics of games, uncertainty, and information.

**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Grade Pass/No Pass Option**Offered:** FALL**Prerequisite for:** AECN 818; AECN 840; AECN 868**AECN 883 Ecological Economics****Crosslisted with:** NRES 883, CDEV 883**Prerequisites:** AECN 141 or ECON 212 or equivalent

**Description:** A synthesis across the notion of "utility" as represented in traditional environmental and natural resource economics, "ecology" in ecological economics, and "community" in behavioral economics. Ideas from thermodynamics with a focus on renewable resources. Development, organization, and enhancement of eco-business, eco-industry, eco-government and eco-communities.

**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Grade Pass/No Pass Option

**AECN 893 Law and Economics**

**Description:** Introduction to economic tools and their application to the law. Overview of the principles of microeconomics and their application to various areas of private law (e.g., torts, contracts, property) and public law (e.g., environmental, constitutional, and criminal law & procedure).

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

**AECN 896 Special Topics in Agricultural Economics**

**Prerequisites:** 12 hrs agricultural economics or closely related areas and permission

**Description:** Focused agricultural economics topics through research, narrowly targeted literature review, or extension of course work.

**Credit Hours:** 1-6

**Min credits per semester:** 1

**Max credits per semester:** 6

**Max credits per degree:** 6

**Grading Option:** Grade Pass/No Pass Option

**AECN 899 Masters Thesis**

**Prerequisites:** Admission to masters degree program and permission of major adviser

**Credit Hours:** 1-10

**Min credits per semester:** 1

**Max credits per semester:** 10

**Max credits per degree:** 99

**Grading Option:** Pass No-Pass

**AECN 901 Directed Study of Advanced Topics in Agricultural Economics**

**Description:** Significant literature in selected fields of agricultural and resource economics to provide a broad background for conducting research in these fields.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 15

**Grading Option:** Grade Pass/No Pass Option

**Prerequisite for:** AECN 902

**AECN 901A Production Economics**

**Prerequisites:** ECON 912A and 911A

**Description:** Significant literature in selected fields of agricultural and resource economics to provide a broad background for conducting research in these fields.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

**Prerequisite for:** AECN 902; AECN 902A

**AECN 901B Agricultural Industrial Organization**

**Prerequisites:** AECN 812

**Description:** Significant literature in selected fields of agricultural and resource economics to provide a broad background for conducting research in these fields.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

**Prerequisite for:** AECN 902; AECN 902B

**AECN 901D International Agricultural Trade**

**Prerequisites:** ECON 821

**Description:** Significant literature in selected fields of agricultural and resource economics to provide a broad background for conducting research in these fields.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

**Prerequisite for:** AECN 902; AECN 902E

**AECN 901E Agricultural Development**

**Prerequisites:** ECON 912A and 911A

**Description:** Significant literature in selected fields of agricultural and resource economics to provide a broad background for conducting research in these fields.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

**Prerequisite for:** AECN 902

**AECN 901J Natural Resource Economics**

**Description:** Significant literature in selected fields of agricultural and resource economics to provide a broad background for conducting research in these fields.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

**Prerequisite for:** AECN 902; AECN 902J

**AECN 902 Research in Agricultural Economics**

**Prerequisites:** Appropriate section of AECN 901

**Description:** Investigation of a research issue in a field of agricultural economics. Identification of an issue, discovery and interpretation of relevant research, rigorous development of an additional contribution to the resolution of the issue.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 15

**Grading Option:** Grade Pass/No Pass Option

**AECN 902A Production Economics**

**Prerequisites:** AECN 901A

**Description:** Investigation of a research issue in a field of agricultural economics. Identification of an issue, discovery and interpretation of relevant research, rigorous development of an additional contribution to the resolution of the issue.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

**AECN 902B Agricultural Industrial Organization**

**Prerequisites:** AECN 901B

**Description:** Investigation of a research issue in a field of agricultural economics. Identification of an issue, discovery and interpretation of relevant research, rigorous development of an additional contribution to the resolution of the issue.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

**AECN 902D International Agricultural Trade**

**Prerequisites:** AECN 901C.

**Description:** Investigation of a research issue in a field of agricultural economics. Identification of an issue, discovery and interpretation of relevant research, rigorous development of an additional contribution to the resolution of the issue.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

**AECN 902E Agricultural Development**

**Prerequisites:** AECN 901D.

**Description:** Investigation of a research issue in a field of agricultural economics. Identification of an issue, discovery and interpretation of relevant research, rigorous development of an additional contribution to the resolution of the issue.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

**AECN 902J Natural Resource Economics**

**Prerequisites:** AECN 901J

**Description:** Investigation of a research issue in a field of agricultural economics. Identification of an issue, discovery and interpretation of relevant research, rigorous development of an additional contribution to the resolution of the issue.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

**Offered:** SPRING

**AECN 921 Seminar in International Trade and Finance**

**Crosslisted with:** ECON 921

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Grade Pass/No Pass Option

**AECN 999 Doctoral Dissertation**

**Prerequisites:** Admission to doctoral degree program and permission of supervisory committee chair

**Credit Hours:** 1-24

**Min credits per semester:** 1

**Max credits per semester:** 24

**Max credits per degree:** 99

**Grading Option:** Pass No-Pass