AGRICULTURAL ECONOMICS

Department of Agricultural Economics
College of Agriculture and Natural Resources

810 Institutional and Behavioral Economics
Fall, 3(3-0) Interdepartmental with Economics and Resource Development. Administered by Agricultural Economics. Relationships among institutions, individual and collective actions, and economic performance. Public choice, property rights, and behavioral theories of firms and bureaucracies.

817 Political Economy of Agricultural and Trade Policy
Spring, 3(3-0) RB: (EC 805 or EC 812A) and (EC 809 or EC 813A) Concepts of policy analysis and decision. Agricultural sector problems, behavior, and policy in the development process. Macroeconomic and trade impacts. International policies affecting trade and development. Current policy issues.

818 Introduction to Econometrics

821 Econometrics II

822 Econometrics III

829 The Economics of Environmental Resources
Fall, 3(3-0) Interdepartmental with Economics and Forestry and Park, Recreation and Tourism Resources and Resource Development. Administered by Agricultural Economics. Economic principles related to environmental conflicts and public policy alternatives. Applications to water quality, land use, conservation, development, and global environmental issues.

830 Wetlands Law and Policy
Spring of odd years. 3(3-0) Interdepartmental with Forestry and Fisheries and Wildlife and Resource Development. Administered by Resource Development. RB: (RD 801) or prior exposure to environmental and natural resource economics, management, policy, or law. An ability to do legal and other library-based research. Origin and development of wetlands law and policy. Wetland functions, mitigation, and banking. Legal, economic, political, and administrative perspectives. Cases, statutes and regulations.

835 Introductory Econometrics
Spring, 3(3-0) RB: STT 430 Estimation and interpretation of multiple regression models and their modifications when usual assumptions are not valid. Applications focus on problems faced by agricultural economists.

839 Applied Operations Research
Fall, 3(3-0) RB: EC 801 SA: AEC 891B Linear and nonlinear programming, spatial equilibrium models, and risk programming. Applications in agribusiness management and in agricultural, environmental, and natural resource economics.

841 Analysis of Food System Organization and Performance
Spring, 3(3-0) Industrial organization, subsector, and transaction cost approaches to analyzing coordination and performance of agricultural markets, contracting, and integration in the food systems of industrialized and developing countries. Applications to issues of organization, control, and public policy.

845 Commodity Market Analysis

851 Agribusiness Operations Management
Spring, 3(3-0) Managerial processes for agribusiness operations control. Applications of linear programming, budgets, simulations, and dynamic programming. Statistical process control. Predictive and prescriptive analysis.

853 Financial Management in Agriculture
Spring, 3(3-0) Financial and investment analysis tools and concepts and their application to decisions faced by agricultural, agribusiness, and food industry firms. Financial institutions and instruments, credit programs, and financial sector performance in low-income and high-income countries.

855 Agricultural Production Economics
Fall, 3(3-0) RB: (EC 801 and EC 805) and (AEC 835 and EC 823) Analysis of production models using econometrics, mathematical programming, and simulation. Systems science perspective.

857 Strategic Management in Agribusiness
Fall, 3(3-0) SA: AEC 891A Managerial problems faced by agribusiness firms. Strategies to interpret and respond to forces affecting the industry. Case study approach.

861 Agriculture in Economic Development
Fall, 3(0-0) Role of agriculture in economic development of low- and middle-income countries. Theories of agricultural growth. Policy issues. Case studies.

865 Agricultural Benefit-Cost Analysis
Spring, 3(3-0) Benefit-cost analysis of agricultural and natural resource projects, including financial and economic analysis. Case studies in project design and appraisal in low and high income countries.

874 Field Data Collection and Analysis in Developing Countries
Summer of odd years. 3(3-0) RB: AEC 861 SA: AEC 891C Designing and conducting socioeconomic surveys to inform agricultural production, marketing, and environmental/natural resource issues in developed and developing countries. Research proposal preparation, questionnaire design, sampling, data collection, and data processing and analysis using computers.

885 Leadership in Natural Resources and Environmental Management
Fall, 3(3-0) Interdepartmental with Forestry and Fisheries and Wildlife and Park, Recreation and Tourism Resources. Administered by Fisheries and Wildlife. Theory and practice of leadership in natural resource and environmental management. Integration across disciplinary and jurisdictional divisions.

890 Independent Study
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to graduate students in the Department of Agricultural Economics. Approval of department. Independent study of selected topics in agricultural economics.

891 Topics in Agricultural Economics
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course. Selected topics in analytical methods, agri-food systems economics and management, and agricultural and natural resource development and policy.

898 Master's Research
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to master's students in the Agricultural Economics major. Approval of department. Master's degree Plan B research.

899 Master's Thesis Research
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to master's students in the Agricultural Economics major. Approval of department. Master's thesis research.
923 Advanced Environmental and Resource Economics
Fall. 3(3-0) Interdepartmental with Economics and Forestry and Park, Recreation and Tourism Resources and Resource Development. Administered by Agricultural Economics. RB: AEC 829 and EC 812A
Advanced economic theory of environmental management and policy. Treatment of externalities and market and non-market approaches to environmental improvement. Topics in conservation and sustainable economic growth. Applications to research and policy.

925 Advanced Natural Resource Economics
Spring. 3(3-0) Interdepartmental with Economics and Forestry and Park, Recreation and Tourism Resources and Resource Development. Administered by Agricultural Economics. RB: EC 812A and AEC 829 and FOR 866 SA: AEC 991H
Economic theory of managing nonrenewable and renewable resources, including optimal use, the incentives for use under decentralized markets, and public policy design. Analysis of the co-evolution of economic and ecological systems.

930 Dynamic Analysis in Agriculture and Natural Resources
Spring. 3(3-0) RB: EC 801 and EC 812A R: Open only to Ph.D. students in the College of Agriculture and Natural Resources or College of Business or College of Social Science or approval of department. SA: AEC 991E
Methods of dynamic optimization and their application to agricultural and natural resources problems. Discrete time dynamic programming, calculus of variations, and discrete time maximum principle.

932 Information Economics and Institutions in Agriculture and Natural Resources
Fall. 3(3-0) RB: (AEC 800 or AEC 810 or AEC 841) and (EC 812A and EC 812B) R: Open only to Ph.D. students in the Colleges of Agriculture and Natural Resources or Business or Social Science. Applications to issues in agriculture, agribusiness, the food system, natural resources, and the environment. Asymmetric information, incomplete markets, principal/agent issues, transaction costs, and the design of contracts and other institutions.

977 Professional Practice in Agricultural Economics
Spring. 3(3-0) R: Open only to Ph.D. students in the Department of Agricultural Economics or Department of Economics. SA: AEC 947
Matching appropriate tools to applied problems in agricultural and resource economics. Individual and team preparation, under tight deadlines, of professional analyses and oral presentations for diverse audiences. Use of peer review.

978 Research Methodologies in Agricultural and Resource Economics
Spring. 3(3-0) R: Open only to Ph.D. students in the College of Agriculture and Natural Resources or College of Business or College of Social Science. SA: AEC 991F

991 Advanced Topics in Agricultural Economics
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to Ph.D. students in the colleges of Agriculture and Natural Resources, Business, and Social Science; or with department approval. Advanced topics such as price analysis, finance, risk and modeling techniques, agri-food systems, environmental economics and management, and agricultural and natural resource development and policy.

999 Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course. R: Open only to doctoral students in the Department of Agricultural Economics. Approval of department. Doctoral dissertation research.