427 Global Agri-Food Industries and Markets
Fall. 3(3-0) Interdepartmental with Food Industry Management. P:M: (FIM 220 or ABM 225)
Strategic understanding of the international agri-food system. Analysis of global production, marketing, and consumption. Knowledge of changing conditions in international industries and markets. Global trends and opportunities.

430 Farm Management II
Fall. 3(4-0) P:M: (ABM 130) R: Open only to juniors or seniors. SA: FSM 330
Advanced management, planning, and control of farm production, marketing, financial activities, economic principles, budgeting and financial statements.

435 Financial Management in the Agri-Food System
Spring. 3(3-0) RB: (ACC 201 or ACC 230) and (ABM 130 or ABM 100 or EC 201 or EC 202) R: Open only to juniors or seniors. SA: FSM 412

437 Agribusiness Strategic Management (W)
Spring. 3(4-0) P:M: (ABM 332 or ABM 430) and completion of Tier I writing requirement. R: Open only to juniors or seniors. SA: FSM 420
Analysis of strategic management issues for agribusiness. Formulation of business strategy and solutions to strategic problems. Integration of operations, marketing, finance and human resource management.

490 Independent Study in Agribusiness Management
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P:M: (ABM 100) R: Open only to sophomores or juniors or seniors in the Agribusiness Management major. Approval of department: application required. Students are limited to a combined total of 6 credits in ABM 490 and FIM 490, SA: FSM 490
Independent supervised study of topics in agribusiness management.

493 Professional Internship in Agribusiness Management
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P:M: (ABM 100) R: Open only to juniors or seniors in the Agribusiness Management major. Approval of department: application required. A student may earn a maximum of 6 credits in all enrollments for any or all of these courses: ABM 493, ANR 493, AEE 493, ANS 493, CSS 493, EEP 493, FIM 493, FW 493, HRT 493, PKG 493, PLP 493, PRR 493, and RD 493.
Supervised professional experience in agribusiness management.

AEC—Agricultural Economics

800 Foundations of Agricultural Economics
Fall. 3(3-0)
Concepts of agricultural economics drawn from economic and management theory. Applications to economic decisions and policy issues related to agricultural, food, and natural resource firms, markets, and institutions.

800A Mathematical Applications in Agricultural Economics
Fall. 1(1-0) C: AEC 800 concurrently.
Basic mathematical tools for use in agricultural economics applications.

810 Institutional and Behavioral Economics
Fall. 3(3-0) Interdepartmental with Economics: Resource Development
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)

822 Econometrics III
Spring. 3(3-0) Interdepartmental with Economics: Statistics and Probability. Administered by Department of Economics. P:M: (EC 820A and EC 820B) or (STT 430 and EC 818)
Dynamic models and time series data. ARMA models. ARCH models. Unit roots, cointegration and error correction. Rational expectations models.

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

845 Commodity Market Analysis Fall. 3(3-0) RB: (AEC 835)

851 Agricultural Firm Management Summer. 3(3-0)
Managerial processes for planning and controlling agricultural firms. Applications of financial concepts, budgets, simulations, and cognitive and information systems to developing and developing countries. 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(3-0)

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 environment/natural resource issues in developed and developing countries. Research proposal preparation, questionnaire design, sampling, data collection, and data processing and analysis using computers.

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 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 99 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 Spring of even years. 3(3-0) Interdepartmental with Economics; Forestry; Park, Recreation and Tourism Resources; Resource Development. RB: (AEC 829 and EC 805) SA: AEC 899A
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 Environmental and Resource Economics Research Spring of odd years. 3(3-0) Interdepartmental with Forestry; Resource Development; Park, Recreation and Tourism Resources; Economics. RB: (AEC 829 and EC 805) SA: AEC 991A
Topics such as contingent or non-market valuation, institutional analysis, pollution prevention, environmental quality and location, recreational demand modeling, and environmental risk management. Research process in environmental and resource economics.

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 991F
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 991C

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.

992 Seminar in Agricultural Economics Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course. R: Open only to Ph.D. students in Agricultural Economics. Approval of department; application required. Price analysis, development, risk, trade, dynamic modeling research methods, finance and environmental economics.

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 Ph.D. students in Agricultural Economics. Approval of department. Doctoral dissertation research.

AGRICULTURAL TECHNOLOGY AT

Institute of Agricultural Technology College of Agriculture and Natural Resources

290 Independent Study in Agricultural Technology 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 freshmen or sophomores in the Institute of Agricultural Technology. Supervised individual study on experimental, theoretical or applied topics related to agricultural science and technology.