Agricultural Economics (AEC)

College of Agriculture and Natural Resources

803. Development and Relevance of Agricultural Economics
Fll. 3/3-0
Emergence of agricultural economics. Problems leading to change. Values and beliefs related to public issues. Interaction between professional and laymen. Departmental economics in Europe and in developing nations.

805. Agricultural Production Economics I
Fall, 3/3-0
FSM or PAM 340; not open to students with credit in FSM or PAM 401.

809. Institutions Behavior and Performance
Fll. 3/3-0 Approval of department.
Relationships among institutional structure, behavior, and performance. Concepts of behavioral science useful in public policy and program analysis emphasizing interactions of preferences, incentives and institutions.

810. Economics of Public Choice
Spring, 3/3-0 Approval of department. Interdepartmental with Resource Development and Economics Departments.
Economics of alternative institutions for collective action. Emphasis on property rights and natural resources. Public goods, externalities, non-marginal change, commonwealth, income and power distribution, grants, welfare criteria and market failure.

811. Public Program Analysis
Spring, Summer of odd-numbered years, 3/3-0 FSM 401 or EC 324 or approval of department. Interdepartmental with the Economics and Resource Development Departments.
Application of benefit-cost analysis to public programs of resource development. Issues and case studies in budgeting, investment criteria, pricing, externalities, and coordination.

830. Data Generation and Analysis
(470) Winter, 4/4-0 STT 421.
Organization of information systems in relation to economics of information. Use of published data and samples. Index numbers. Regression, hypothesis testing and decision making. Emphasis on social science applications.

833. Mathematical Programming
Spring, 3/3-0 EC 806 or 812A, MTH 324. Interdepartmental with the Economics, and Statistics and Probability Departments.
Linear programming. Theory of linear economic models. Topics in nonlinear programming.

835. Introduction to Econometrics
Fall, Spring, Summer, 3/3-0 EC 325, STT 422. Interdepartmental with and administered by the Economics Department.

837. Applied Operations Research I
Spring, 4/4-0 MTH 113 or 226. Approval of department.
Use and interpretation of operations research techniques for problems encountered by agricultural economists. Emphasis on linear programming and its variations such as transportation models, network analysis, spatial equilibrium models.

838. Applied Operations Research II
Summer, 2/2-0 MTH 113 or 228, STT 422. Approval of department.
Use and interpretation of operations research techniques for problems encountered by agricultural economists. Emphasis on techniques such as Markov processes, dynamic programming, cohort analysis, queuing, Monte-Carlo techniques, elementary simulation.

841. Advanced Agricultural Marketing
Fall, 3/3-0 Approval of department.

851. Advanced Farm Management
Spring, 3/3-0 FSM 430 or approval of department.
Emphasis on identification, analysis, and methods of solving problems of farm organization and operation; new technology, specialization and scale. Farm case studies, role-playing, computer games and farm business simulation.

860. Rural Welfare and Development Policy
Spring, 3/3-0 Approval of department.

861. Agricultural Trade Policies
Fall of odd-numbered years; Summer of even-numbered years, 3/3-0 FSM 430 or approval of department.
International trade in agricultural products, areas of competition, changes in comparative advantage, international trade, regional groupings, trade and economic development, current policy proposals.

862. Agriculture in Economic Development
Winter, 3/3-0 PAM 482 or approval of department.
Agricultural and industrial sector interactions in the development process. Theories and models of the agricultural development process. Transformation of agriculture in less-developed countries.

865. Rural Development Administration
Winter, 3/3-0 Approval of department.
Concepts and principles of development administration and their application in the analysis of the processes and structures through which rural development activities are formulated and implemented in less developed countries.

866. Public Institutions and Rural Development Administration
Spring, 3/3-0 Approval of department.
Application of administrative tools and techniques in organizing and evaluating public institutions. Analysis of institutional effectiveness in implementing rural programs in developed and developing countries. Cross-cultural considerations emphasized.

876. Statistical Inference in Economics I
Fall. 3/3-0 EC 812C or 801; STT 443 or 865; or approval of department. Interdepartmental with the Economics, and Statistics and Probability Departments and administered by the Economics Department.

877. Statistical Inference in Economics II
Spring. 3/3-0 EC 876 or approval of department. Interdepartmental with the Economics, and Statistics and Probability Departments and administered by the Economics Department.

882. Independent and Supervised Study
Fall, Winter, Spring, Summer. 1 to 15 credits. May re-enroll for a maximum of 12 credits. Approval of department. Arranged seminars initiated by faculty or students; supervised readings; individual study of special problems.

899. Research
Fall, Winter, Spring. Variable credit. Approval of department.

906. Agricultural Production Economics II
Winter. 4/4-0 805 or FSM 401.
Resource allocation and efficiency in agriculture as related to management under conditions of both market and imperfect knowledge of price, institutional, technological and human change. Advanced topics.

941. Seminar in Food Systems Organization and Policy
Spring of odd-numbered years; Summer of even-numbered years, 3/3-0 Approval of department.
Alternative methods of organization and control of food systems. Policy and program analysis. Development and presentation of position papers.

960. Agricultural Policy in Developed Economies
Winter. 3/3-0 FSM 421 and one year of graduate work in social science or approval of department.
Sectoral interrelationships and the impact of economic policies relating to agriculture in advanced economies. Public decision processes. Current issues in food and fiber policy.
982. Development Planning and Agricultural Sector Analysis
Spring, 3(3-0) 692. One year of graduate study in agricultural economics or economics or approval of department.

972. Methodological Approaches to Research
Fall of even-numbered years, Summer of odd-numbered years. 3(3-0) Two terms of graduate study in social science or approval of department. Interdepartmental with the Economics Department.
Selection, planning and conduct of research. Alternative research approaches. Role of theory, beliefs and valuations. Critical appraisal of research studies.

990C. Mathematical Economics and Econometrics Workshop
Fall, Winter, Spring. 3 to 16 credits. EC 813A, 813B, or approval of department. Interdepartmental with and administered by the Economics Department.
Critical evaluation of research reports by staff and other students. Students writing doctoral dissertations in the appropriate areas are encouraged to participate in workshop and may do so while registered for 990C.

999. Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

Food Systems Economics and Management

200. Introduction to Food Systems Management
Fall. 3(3-0)
Organization of modern industrialized food production and distribution systems. Problems faced by managers of firms in food systems. Applications of economic and management principles in the solution of these problems.

330. Food Production Management
Fall. 3(3-0)
Description and analysis of problems faced by managers of input supply, farm, and packing and handling firms. Emphasis on planning, organization, adjustment to technological change, growth and personnel management.

335. Food Processing and Distribution Management
Winter. 3(3-0) 200 or MTA 390. Interdepartmental with and administered by the Marketing and Transportation Administration Department.
Analysis of problems faced in the food processing and distribution system. Includes functional interrelationships, consumer orientation and future development.

340. Managerial Economics
Spring. 3(3-0) One 300 level food systems economics and management or public affairs management course. Interdepartmental with and administered by Public Affairs Management.
Production, consumption decisions and their interrelations. Domestic and international market and non-market goods. Effects of monetary and fiscal policies. Applications to problems in food system or community management.

370. Applied Statistics
Winter. 3(3-0) Students may not receive credit in both FSM 370 and AEC 930. One course in statistics, one course in food systems economics and management or public affairs management. Interdepartmental with and administered by Public Affairs Management.
Interpretation and use of statistical results in decision making. Sampling, index numbers, tabular analysis, trend estimation, regression models, decision theory.

401. Production Economics and Management
(AEC 401) Fall. 4(4-0) Not open to graduate students in Agricultural Economics, Economics or Resource Development. Interdepartmental with the Resource Development Department and Public Affairs Management.

412. Financing the Food System
(AEC 412) Spring. 3(3-0) 200 or EC 201.
Capital, sources and requirements in the food system. Sources and terms of credit. Credit instruments. Interest rates. Credit policy issues. Principles of financial management and real estate appraisal.

417. Land Economics
Fall, Spring. 4(4-0) Interdepartmental with the Resource Development and Economics Department and Public Affairs Management and administered by the Resource Development Department.
Factors affecting men's economic use of land and space resources. Input-output relationships; development, investment, and enterprise location decisions. Land markets; property rights; area planning; zoning and land use controls.

421. Public Policy and the Food System
Winter. 3(3-0) 200 or EC 201, PAM 320 recommended.
Policy issues identified and analyzed in relation to performance goals of society and groups within the food system. Emphasis on price and income policies and regulations affecting the food system.

422. Food System Managers in the Community
Spring. 3(3-0) 481, 450 or 439.
Examination of political and social issues affecting individual participants and businesses in the food sector.

430. Advanced Food Production Management
Fall. 3(3-0) 330.
Management principles and techniques applied to food production firms including farms, input suppliers, packers and handlers. Emphasis on planning, growth, finance and decision processes. Case studies and gaming.

439. Advanced Food Processing and Distribution Management
Fall. 3(3-0) 335. Interdepartmental with and administered by the Marketing and Transportation Administration Department.
Managerial principles and techniques applied to food processing and distribution. Emphasizes adjustment to changing social, economic and internal company environment. Student interaction with industry, labor and government representatives. Field trips, special projects.

443. Group Action in Marketing
(AEC 443) Spring. 3(3-0) 200.
Characterization, problems and strategies of cooperatives, unions, bargaining groups, trade associations and other voluntary organizations. Effects of group action on farmers, marketing firms and consumers. Legal restraints and facilitation of group action.

460. Location Analysis
Winter. 4(4-0) 417 or 401 or EC 334. Interdepartmental with the Resource Development and Economics Departments, and Public Affairs Management and administered by the Resource Development Department.
Forces affecting location decisions of firms, households and governments. Applications to agricultural, industrial, and regional developments.

462. Rural Transformation in Developing Societies
Fall. 3(3-0) PAM 201 or EC 201; PAM 200 recommended. Interdepartmental with Public Affairs Management and Agriculture.
Traditional agricultural systems and the incentive environment for economic growth in rural areas. Adjustment to technological, institutional and human change. Strategies for rapid agricultural transformation.

473. Introduction to Systems Analysis
Spring. 3(3-0) MTH 111. Interdepartmental with and administered by Public Affairs Management.
Principles of systems analysis applied to ecological, physical, economic and social phenomena. Case studies. Interpretation and design of systems models. Systems concepts in decision making.

450. Independent and Supervised Study
Fall, Winter, Spring, Summer. 1 to 9 credits. May re-enroll for a maximum of 9 credits. Approval of department.

Public Affairs Management
PAM

201. Introduction to Community Economics
Fall, Spring. 3(3-0)
Identification and analysis of problems faced by public decision makers in managing public revenues and services and governing private resource use. Impact of political and economic structures on resource use.

280. World Food, Population and Poverty
Winter. 3(3-0)
Description, analysis and alternative solutions of food, population and poverty problems, especially in relation to trade and aid programs. Special emphasis on problems of low income nations.

303. Welfare, Health and Education Policy
Fall. 3(3-0) 201 or EC 200.
Evaluation of selected welfare, health and education policies and alternative levels of government. Role of economic interests and pressures. Alternative processes for economic policy formulation. Case studies.