828. Teaching Farmer Classes in Agriculture
(ED 828B, ANR 828) Fall of even-numbered years. 3(3-0) Approval of department.
Objectives of adult education in agriculture, organizing and promoting classes, course planning, instructional procedures, follow-up and evaluation.

AGRICULTURAL ECONOMICS

AEC

College of Agriculture and Natural Resources

805. Agricultural Production Economics I
Fall. 4(4-0) EC 324, PAM 370.

809. Institutions, Behavior and Performance
Fall. 3(3-0) EC 324, EC 386; or approval of department.
Conceptual approaches to economic analyses of public policy issues and programs with emphasis on the relationships among institutions, behavior of participants and performance.

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

831. Food Marketing Management
Fall, Spring. 4(4-0) May reenroll for a maximum of 8 credits. Interdepartmental with and administered by the Department of Marketing and Transportation Administration. Food industry adjustment to changing social, economic and internal company environment. Managerial principles and techniques applied to food processing and distribution. Student interaction with industry, labor and government representatives.

835. Introduction to Econometrics
Spring, Summer. 3(3-0) EC 325, STT 422; not open to students with credit in EC 833. Interdepartmental with and administered by the Department of Economics. Specification, estimation and interpretation of economic models. Applications to empirical problems.

837. Applied Operations Research
Spring. 4(4-0) EC 324, PAM 370. 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.

839. Topics in Dynamic Agricultural Economics
Variable credits. Approval of department.

841. Industrial Organization of Agricultural Markets
Spring. 3(3-0) EC 324, a junior-level course in agricultural marketing.
Conceptual and analytical approaches to identify and assess market performance. Institutions and market processes for coordinating agricultural systems, issues of organization, control, and public policy.

843. Commodity Market Analysis
Fall. 3(3-0) EC 335 or approval of department.
Projecting short- and long-run demand, supply and prices of agricultural commodities. Data collection, model development and use of computers for understanding and measuring market dynamics. Futures and options markets.

850. Agricultural Production Management in Developing Countries
Winter. 3(3-0) EC 324 or approval of department. Not open to students with credit in FSM 430. Farm management applications of comparative analysis, forward planning, budgeting, cash flow analysis and computing aid to decision making. Principles illustrated with developing country case studies.

851. Farm Management
Summer of even-numbered years. 3(3-0) FSM 430 or AEC 850 or approval of department.
Managerial processes for problem solving, planning and controlling. Review of decision literature in cognitive and information sciences. Budgeting, optimizing, scenario and stochastic simulation for predictive and prescriptive purposes.

853. Decision Support Systems for Agriculture
Fall of even-numbered years. 3(3-0) AEC 850; AEC 851 recommended. Development and design of information systems. Database and modelbase systems with emphasis on decision maker/information system interfaces. Analyses of systems using case studies.

860. Agricultural Policy in Developed Economies

861. Agricultural Trade Policies
Fall of odd-numbered years; Summer of even-numbered years. 3(3-0) EC 324, EC 326; or approval of department. International trade in agricultural products, areas of competition, changes in comparative advantage, interrelationship of national and international policy regional groupings, trade and economic development, current policy proposals.

862. Agriculture in Economic Development
Winter. 3(3-0) EC 324, EC 326, PAM 462; or approval of department. Agricultural and industrial sector interactions in the development process, examined from both historical and theoretical perspectives. Theories and models of the agricultural development process. Policy issues in agricultural development.
Section 863. Benefit Cost Analysis
Spring. 3(0-0) AEC 805 or AEC 850 or approval of department. Interdepartmental with the departments of Resource Development. 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.

Section 865. Data Collection and Analysis in Developing Countries
Spring of even-numbered years. Summer of odd-numbered years. 3(0-0) STT 242, one year of graduate study; or approval of department. Conducting farm/household/firm level studies of production and marketing. Preparing research proposals. Methodologies for data collection, processing, and analysis. Microcomputer applications. Field research administration. Statistical systems in developing countries.

Section 876. Statistical Inference in Economics I
Fall. 3(0-0) ECI 812A or EC 805A; STT 443 or STT 883; or approval of department. Interdepartmental with the departments of Economics, and Statistics and Probability. Administered by the Department of Economics. Review and extension of single-equation regression models. Properties of least-squares estimators under alternative specifications. Problems of analyzing nonexperimental data. Errors in variables, autoregressive and heteroscedastic models.

Section 877. Statistical Inference in Economics II

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

Section 899. Master's Thesis Research
Fall, Winter, Spring. Summer. Variable credit. Approval of department.

Section 916. Development Administration
Fall of odd-numbered years. 3(0-0) Interdepartmental with and administered by the Department of Political Science. Design and organization of policies, programs, and projects for Third World socioeconomic development. Effect of politics and culture on organizational performance. Public management process from planning to evaluation.

Section 941. Seminar in Food Systems Organizations and Policy
Summer. 3(0-0) AEC 809, AEC 841, AEC 846; or approval of department. Professional role simulation. Analysis under time pressure. Oral and written presentations in defense of positions on problems of market organization and related policy issues confronting agricultural economists.

Section 995. Advanced Topics
Fall, Winter, Spring, Summer. 1 to 3 credits. May reenroll for a maximum of 3 credits. Approval of department. Topics include agricultural marketing and price analysis, farm management, international agricultural development, production economics, public policy, and resource economics.

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

Food Systems Economics and Management

Section 330. Food Production Management
Fall. Spring. 3(0-0) Problems encountered by managers of farms and input supply firms. Identification and evaluation of alternative solutions using economic principles, financial statements and budgeting.

Section 335. Food Processing and Distribution Management
Winter. 3(0-0) FSM 200 or MTA 380. Interdepartmental with and administered by the Department of Marketing and Transportation Administration. Analysis of problems faced in the food processing and distribution system. Includes functional interrelationships, consumer orientation and future development.

Section 370. Applied Statistics
Winter. 3(0-0) 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.
441. Commodity and Futures Marketing
Spring. 3(3-0) STT 201, EC 201; FSM 370 or STT 317 recommended.
Commodity pricing and use of marketing alternatives. Special emphasis on the futures markets and the institutional arrangements useful to farmers, elevator operators and commodity traders.

443. Cooperatives: Group Action in Marketing
Spring. 3(3-0) EC 201 or EC 202, Juniors or approval of department.
Organization and operation of cooperatives. Emphasis on economics, legal foundations, and feasibility of cooperatives and other forms of group action in the U.S. food system.

460. Regional Economics
Winter. 4(4-0) R D 417 or EC 324. Interdepartmental with Public Affairs Management and the departments of Economics and Resource Development. Administered by the Department of Resource Development.
Forces affecting location decisions of firms, households and governments. Applications to agricultural, industrial, and regional developments.

461. Regional Economics Laboratory
Spring. 1(0-2) R D 460 and approval of department. Interdepartmental with Public Affairs Management and Agriculture and Natural Resources.
Traditional agricultural systems and the incentive environment for economic growth in rural areas. Adjustment to technological, institutional and human choice strategies for rapid agricultural transformation.

480. Independent and Supervised Study
Fall, Winter, Spring, Summer. 1 to 8 credits. May reenroll for maximum of 8 credits. Approval of department.

484. Selected Topics
Fall, Winter, Spring. 1 to 4 credits. May reenroll for a maximum of 12 credits if different topics are taken. Approval of department.

Public Affairs Management

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

204. World Food, Population and Poverty
Winter. 3(3-0)
Description, analysis and alternative solutions of food, technology transfer, population and poverty problems, including trade and aid programs and the role of multinational firms in low-income nations.

206. Government Programs for Workers
Winter, Spring. 4(4-0) EC 201. Interdepartmental with and administered by the Department of Economics.
Economics of selected government institutions and programs for workers. Social security, worker's compensation, Unemployment Insurance, OSHA, employment and training programs, wages and hours legislation, anti-discrimination programs.

260. Economic Policy Processes I
Fall. 3(3-0) PAM 201 or EC 201.
Analysis of processes by which public economic policy is established at various levels of government. Role of economic interests and pressures. Alternative processes for economic policy formulation. Case studies.

261. Economic Policy Processes II
Winter. 3(3-0) PAM 320 or approval of department.
Analysis of socioeconomic forces as they affect the public decision processes for economic policy. Means of increasing effectiveness of staff persons in the decision process. Case studies.

349. Managerial Economics
Spring. 3(3-0) EC 201.
Production, consumption decisions and their interrelation. Pricing of market and non-market goods. Effects of monetary and fiscal policies. Applications to problems in food system or community management.

363. Economic Development of Tropical Africa
Spring. 3(3-0) EC 201. EC 202 or EC 210. Interdepartmental with and administered by the Department of Economics.

370. Applied Statistics
Winter. 3(3-0) One course in statistics, one course in food systems economics and management or public affairs management. Interdepartmental with Food Systems Economics and Management.
Interpretation and use of statistical results in decision making. Sampling index numbers, tabular analysis, trend estimation, regression models, decision theory.

404. Social Accounts and Community Choice
Winter. 3(3-0) PAM 305 or approval of department.
Social accounting as a framework for problem definition and measurement of policy effectiveness. Conceptualization of social accounts. Use of selected social indicators in policy formulation and decision making.

406. Public Expenditure: Theory and Policy
Fall, Spring. 4(4-0) EC 201 or EC 210. Interdepartmental with and administered by the Department of Economics.
Expenditure theory; objectives and rationale of government activity in the market system; efficiency criteria in government decision making; planning, programming, budgeting systems and cost-benefit analysis.

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

431. Law and Social Change
Fall, Spring. 3(3-0) GBL 430 or approval of department. Interdepartmental with and administered by the Department of Resource Development.
Law as applied to urban and rural context of social change. A review of both formal and informal aspects of system accessibility, institutional formation, government, civil rights, and human service.

453. Women and Work: Issues and Policy Analysis
Winter. 3(3-0) PAM 201 or EC 201 or EC 202 or approval of department. Interdepartmental with and administered by the Department of Economics.
Quantitative and qualitative labor force participation by women, current status and past trends. Issues analyzed include differential earnings and occupations of men and women, employment discrimination and labor legislation.

460. Regional Economics
Winter. 4(4-0) R D 417 or EC 324. Interdepartmental with Food Systems Economics and Management and the departments of Economics and Resource Development. Administered by the Department of Resource Development.
Forces affecting location decisions of firms, households and governments. Applications to agricultural, industrial, and regional developments.

461. Regional Economics Laboratory
Spring. 1(0-2) R D 460 and approval of department. Interdepartmental with Public Affairs Management and Agriculture and Natural Resources.
Traditional agricultural systems and the incentive environment for economic growth in rural areas. Adjustment to technological, institutional and human choice strategies for rapid agricultural transformation.

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Public Affairs Management

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

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Winter. 3(3-0)
Description, analysis and alternative solutions of food, technology transfer, population and poverty problems, including trade and aid programs and the role of multinational firms in low-income nations.