

930. Advanced Forest Genetics
Fall of odd-numbered years. 2(1-2) Interdepartmental with Forestry and Horticulture. Administered by Forestry.
P: HRT 819 or HRT 836.
Applications of genetics, plant breeding, and biotechnology to the improvement, and preservation of diversity, of tree species.

940. Advanced Soil Physics
Fall of even-numbered years. 2(2-0)
P: CSS 840. R: Open only to graduate students in College of Agriculture and Natural Resources, College of Engineering, or College of Natural Science.
Modelling major physical transport mechanisms in the soil profile. Aeration, temperature and solute movement. Water movement and evaporation.

941. Quantitative Genetics in Plant Breeding
Spring of even-numbered years. 3(3-0) Interdepartmental with Forestry and Horticulture.
P: CSS 450, STT 422.
Theoretical genetic basis of plant breeding with emphasis on traits exhibiting continuous variation. Classical and contemporary approaches to the study and manipulation of quantitative trait loci.

943. Techniques of Analyzing Unbalanced Research Data
Spring, 4(4-0) Interdepartmental with Animal Science, Forestry, Horticulture, and Fisheries and Wildlife. Administered by Animal Science.
P: STT 464. R: Open only to graduate students in the College of Agriculture and Natural Resources.
Linear model techniques to analyze research data characterized by missing and unequal number of observations in classes. Simultaneous consideration of multiple factors. Estimable comparisons. Hypothesis testing. Computational strategies. Variance and covariance components. Breeding values.

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 Crop and Soil Sciences.

EARTH SCIENCE

ES

Department of Geological Sciences College of Natural Science

445. Field Studies in Earth Science
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course.
R: Approval of department.
Field experience and techniques in geological sciences, meteorology, soil science, or oceanology.

446. Laboratory Investigations in Earth Science
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course.
P: ES 445 or concurrently. R: Approval of department.
Laboratory techniques and investigations in geological sciences, meteorology, soil science, or oceanology.

800. Special Problems in Earth Science
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course.
R: Approval of department.
Individual faculty directed study on topics in earth science.

ECONOMICS

EC

Department of Economics The Eli Broad College of Business and The Eli Broad Graduate School of Management

201. Introduction to Microeconomics
Fall, Spring, Summer. 3(3-0)
R: Not open to students with credit in EC 251H.
Economic institutions, reasoning and analysis. Consumption, production, determination of price and quantity in different markets. Income distribution, market structure and normative analysis.

202. Introduction to Macroeconomics
Fall, Spring, Summer. 3(3-0)
R: Not open to students with credit in EC 252H.
Determinants of Gross National Product, unemployment, inflation and economic growth. National income accounting and fiscal policy. Aggregate demand, supply management and monetary policy.

210. Economics Principles Using Calculus
Fall. 3(3-0)
P: MTH 133 or MTH 153H or MTH 126. R: Not open to students with credit in EC 201 or EC 202.
A combined microeconomics and macroeconomics course. Emphasis on topics of interest in engineering and management, such as discounting, cost-benefit analysis, innovation, externalities, and the role of government regulation.

251H. Microeconomics and Public Policy
Fall, Spring. 4(4-0)
R: Not open to students with credit in EC 301.
Theories of consumer behavior, production and cost. Output and price determination in competition and monopolies. Welfare economics, general equilibrium, externalities, and public goods.

252H. Macroeconomics and Public Policy
Fall, Spring. 3(3-0)
P: EC 251H; or EC 201, EC 301. R: Not open to students with credit in EC 302.
Theory of national income, unemployment, inflation and economic growth and its application to economic analysis and policy.

301. Intermediate Microeconomics
Fall, Spring, Summer. 3(3-0)
P: EC 201, EC 202. R: Not open to students with credit in EC 251H.
Theories of consumer choice, production, cost, perfect competition, and monopoly. Welfare economics, general equilibrium, externalities and public goods.

302. Intermediate Macroeconomics
Fall, Spring, Summer. 3(3-0)
P: EC 201, EC 202. R: Not open to students with credit in EC 252H.
National income accounting. Determination of aggregate output, employment, price level, and inflation rate. Policy implications.

303. Economic Thought I
Fall. 3(3-0)
P: EC 201 or EC 251H; EC 202 or EC 252H.
Forerunners of classical economics. Classical economic thought from Adam Smith to J.S. Mill. The socialist reaction.
SA: EC 403

304. Economic Thought II
Spring. 3(3-0)
P: EC 201 or EC 251H; EC 202 or EC 252H.
Decline of classical economics and rise of marginalist value and distribution theory. Marxism and institutionalism.
SA: EC 404

306. Comparative Economic Systems
Fall. 3(3-0)
P: EC 201 or EC 251H; EC 202 or EC 252H.
Characteristics and functions of economic systems. Alternative patterns of economic control, planning, and market structure. Theories, philosophies, and experiences associated with capitalism, socialism, and mixed economies.

310. Economics of Developing Countries
Spring. 3(3-0)
P: EC 201 or EC 251H
Overview of economic patterns and policy issues of developing countries such as modern economic growth and structural transformation, state controls versus markets, poverty and human welfare, investments in human resources, and trade and industrialization.

330. Money, Banking, and Financial Markets
Fall, Spring, Summer. 3(3-0)
P: EC 201 or EC 251H; EC 202 or EC 252H.
Money markets and financial intermediation. Money, the Federal Reserve System, and monetary policy. Regulation of money markets.

335. Taxes, Government Spending and Public Policy
Fall, Spring, Summer. 3(3-0) Interdepartmental with Public Resource Management.
P: EC 201 or EC 251H. R: Not open to students with credit in EC 435 or EC 436.
Economics of the public sector. Public goods, externalities, design and incidence of the tax system. Equity and efficiency effects of government programs.

340. Survey of International Economics
Fall, Spring, Summer. 3(3-0)
P: EC 201 or EC 251H; EC 202 or EC 252H. R: Not open to students with credit in EC 440 or EC 441.
Comparative advantage. Costs and benefits of trade. International economic policies. Balance of payments. Foreign exchange markets. The international monetary system. Contemporary trade and international currency issues.

360. Private Enterprise and Public Policy
Fall, Spring, Summer. 3(3-0)
P: EC 201 or EC 251H.
Effects of antitrust, economic regulation, and other public policies on competition, monopoly, and other market problems in the United States economy.

380. Labor Relations and Labor Market Policy
Fall, Spring, Summer. 3(3-0)
P: EC 201 or EC 251H.
Development, functions, legal framework, and economic effects of unions and collective bargaining. Institutions and economic impacts of government programs. Minimum wages, workers' compensation, unemployment insurance, and antidiscrimination policies.

385. International Labor Market Policy and Labor Relations
Fall. 3(3-0)
P: EC 201 or EC 251H R: Not open to students with credit in EC 380.
Comparative treatment of labor policy and labor relations in the United States, Western Europe, Japan, Canada, and Australia. Analysis of how different policies affect wages, living standards, and economic efficiency. Labor markets and integration of national economies.

401. Advanced Microeconomics
Fall, Spring. 3(3-0)
P: EC 301 or EC 251H.
Economics of uncertainty and incomplete information. Game theory and theories of oligopoly. Transaction costs. Advanced topics in welfare economics, general equilibrium, externalities, and public goods.

- 402. Advanced Macroeconomics**
Fall, Spring. 3(3-0)
P: EC 251H or EC 301; EC 252H or EC 302.
Consumption, investment, and monetary theories. The role of expectations. Theories of economic growth and cycles. Stabilization policies.
- 405. The Development of the American Economy**
Spring. 3(3-0)
P: EC 201 or EC 251H; EC 202 or EC 252H.
Causes and consequences of American economic development. Economic analysis of topics such as British trade policies, slavery, industrialization, immigration, the Great Depression, wars and income distribution.
- 406. Economic Analysis of the Soviet Union and Transition Economy**
Spring of even-numbered years. 3(3-0)
P: EC 201 or EC 251H; EC 202 or EC 252H.
History and analysis of Soviet planning, banking, and pricing systems. Analysis of labor markets and capital allocation under planning and transition.
- 410. Issues in the Economics of Developing Countries**
Fall. 3(3-0)
P: EC 201 or EC 251H; EC 202 or EC 252H.
Growth and transformation of low-income countries. Discontinuities, dualism. Capital, total factor productivity. Agriculture, natural resources. Population, health, nutrition. Labor, education. Entrepreneurship, technological change. Urbanization.
- 411. Issues in Economic Development**
Spring. 3(3-0)
P: EC 201 or EC 251H; EC 202 or EC 252H.
Mobilizing and allocating capital for raising productivity. Monetary policy, financial intermediaries. Investment criteria and project analysis. Taxes and public expenditures. Trade policy, foreign capital, international disequilibrium, and structural adjustment.
- 412. Economic Analysis of Latin America**
Fall of even-numbered years. 3(3-0)
P: EC 201 or EC 251H; EC 202 or EC 252H.
Population growth, agriculture, and urbanization. Dependence on primary exports and import protection. Inequality and populist-orthodox policy cycles. Hyperinflation, international debt crises, and adjustments. United States policy interests and interventions.
- 413. Economic Analysis of Asia**
Spring of odd-numbered years. 3(3-0)
P: EC 201 or EC 251H; EC 202 or EC 252H.
Development of agriculture, industry, labor markets, and trade in some of the following: India and South Asia, China, the Pacific Rim countries, and Japan. Productivity, income distribution, finance, and planning.
- 414. Economic Analysis of Sub-Saharan Africa**
Fall of odd-numbered years. 3(3-0)
P: EC 201 or EC 251H; EC 202 or EC 252H.
African economic development in historical perspective. Contemporary development issues including population growth, agricultural and industrial development, and foreign trade. Alternative strategies for African economic development.
- 420. Introduction to Econometric Methods**
Fall, Spring. 3(3-0)
P: EC 251H or EC 301; EC 252H or EC 302; STT 315 or STT 421.
Specification, estimation, and interpretation of econometric models. Evaluation of current quantitative work in economics.
- 435. Public Expenditures**
Fall. 3(3-0)
P: EC 251H or EC 301.
Expenditure theory. Objectives and rationale of government activity in the market system. Efficiency criteria in government decision-making. Public choice. Cost benefit analysis.
- 436. Public Revenues**
Spring. 3(3-0)
P: EC 251H or EC 301.
Principles and theory of efficiency and the incidence of taxation. Income and sales taxes and other major revenue sources.
- 437. State and Local Public Finance**
Fall of even-numbered years. 3(3-0)
P: EC 201 or EC 251H.
Theoretical and policy analysis of state and local government fiscal behavior. Revenues, expenditures, borrowing, intergovernmental fiscal relations. Applications to such areas as education, transportation, and economic development. Intergovernmental comparisons.
- 440. International Trade**
Fall. 3(3-0)
P: EC 251H or EC 301.
Neoclassical and modern theories regarding trade patterns and commercial policies. Applications of theory to United States policy. Contemporary issues involving international trade of goods, services, and productive factors.
- 441. International Finance**
Spring. 3(3-0)
P: EC 252H or EC 302.
Neoclassical and modern theories pertaining to balance of payments and exchange rate determination. Macroeconomic performance under alternative exchange rate regimes. Contemporary issues involving international monetary arrangements.
- 453. Women and Work: Issues and Policy Analysis**
Spring. 3(3-0) Interdepartmental with Public Resource Management and Women's Studies. Administered by Public Resource Management.
P: EC 201 or EC 202 or PRM 201 or concurrently. R: Not open to freshmen and sophomores.
Current and past quantity and quality of women's participation in the labor force. Gender differentials in earnings, and occupations. Employment discrimination. Laws, especially affirmative action laws. Social policy effects. International issues.
- 460. American Industry: Structure and Behavior**
Fall, Spring. 3(3-0)
P: EC 251H or EC 301.
Market structure and performance. Empirical analysis of market definition, concentration, product differentiation, vertical integration, innovativeness, collusion, and entry deterrence.
- 461. Regional Economics**
Fall. 4(3-2) Interdepartmental with Resource Development and Public Resource Management. Administered by Resource Development.
P: RD 200; EC 201 or RD 460. R: Not open to freshmen or sophomores.
Location decisions of firms and households. Relevant government policies. Applications of regional analysis to industrial, regional, and community development.
- 480. Analysis of Labor Markets**
Fall, Spring. 3(3-0)
P: EC 251H or EC 301.
Labor supply and demand. Human capital, search, migration, and labor turnover. Analysis of unemployment and wage growth. Structure of wages, including economics of discrimination.
- 490. Independent Study**
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course.
Research and reading course for students interested in doing independent work in economics under faculty supervision.
- 495. Economics of Poverty and Income Distribution**
Fall. 3(3-0)
P: EC 201 or EC 251H.
Theory of the distribution of income and wealth. Concepts and measurement of welfare. Definitions of poverty. Effects of public and private programs on the poor.
- 496. Interpreting Economic News and Research**
Spring of even-numbered years. 3(3-0)
P: EC 201 or EC 251H; EC 202 or EC 252H.
Reporting and interpreting economic news and research. Sources of data and research information. Critical examination of written and broadcast reports through application of economic principles. Case studies.
- 497. Economics of Education**
Spring of odd-numbered years. 3(3-0)
P: EC 201 or EC 251H.
Relationship between education and the economy. Production of education. Analysis of education as an investment. Supply and demand for teacher services. Financing education.
- 498. Economics of Health Care**
Fall of odd-numbered years. 3(3-0)
P: EC 201 or EC 251H.
Economic factors in determining health care costs, utilization, quality, and efficiency. Demand and insurance. Comparative health care systems. Public policy issues.
- 499. Senior Seminar for Economics Majors (W)**
Fall, Spring. 3(3-0)
P: EC 251H or EC 301; EC 252H or EC 302; EC 420 or concurrently. R: Open only to seniors in Economics. Completion of Tier I writing requirement.
Capstone course for economics majors. Reading and discussion concerning selected economics topics. Preparation and presentation of student research project.
- 801. Mathematical Applications in Economics**
Fall. 3(3-0)
P: MTH 120 or MTH 124 or MTH 132. R: Open only to graduate students in Economics, Agricultural Economics, and Business Administration.
Applications of mathematical tools in economic analysis. Matrix algebra, derivatives, partial derivatives, optimization, integration and linear differential equations.
- 803. Managerial Economics**
Fall, Spring. 3(3-0)
R: Open only to MBA students. Not open to students with credit in EC 805 or EC 812A.
Analysis of the firm. Economizing in the use of resources, optimal combinations of products, pricing, competitive forces in regional and international markets affecting the firm.
- 804. Macroeconomics**
Fall, Spring. 3(3-0)
P: EC 803. R: Open only to MBA students. Not open to students with credit in EC 809 or EC 813A.
Determinants of national income, employment, and inflation. National income accounting. Business fluctuations, fiscal and monetary policy, international trade, and capital flows.

**Descriptions —Economics
of
Courses**

805. Microeconomic Analysis
Fall. 3(3-0)

P: EC 301; EC 801 or MTH 126, or concurrently. R: Open only to graduate students in Economics, Agricultural Economics, and Business Administration. Not open to students with credit in EC 812A. Microeconomic theory with calculus. Production, costs, demand, markets, general equilibrium and welfare theory.

807. Applied Microeconomic Analysis
Spring. 3(3-0)

P: EC 805.
Applications of microeconomic theory taken from public finance, labor economics, international trade, and industrial organization.

809. Macroeconomic Analysis
Spring. 3(3-0)

P: EC 302; EC 801 or MTH 126, or concurrently. R: Not open to students with credit in EC 813A. Closed- and open-economy macroeconomic theory with calculus. Inflation, unemployment, growth, business cycles, consumption, investment, and money demand. Policy debates and macroeconomic forecasting.

810. Institutional and Behavioral Economics
Fall. 3(3-0) Interdepartmental with Agricultural 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.

811. The Structure of Economic Analysis
Fall. 3(3-0)

P: MTH 133 or EC 801. R: Open only to graduate students in Economics, Agricultural Economics, and Business Administration. Static and dynamic decision models in economics. Concepts of equilibrium, stability, comparative statics and duality.

812A. Microeconomics I
Fall. 3(3-0)

P: EC 811 or concurrently.
Consumption theory, including choice under uncertainty. Theory of production in perfectly competitive markets. General equilibrium in the presence of perfect competition. Efficiency properties of competitive equilibria.

812B. Microeconomics II
Spring. 3(3-0)

P: EC 812A.
Introduction to social choice. Market failure, including externalities, public goods, imperfect information and market power.

813A. Macroeconomics I
Fall. 3(3-0)

P: EC 811 or concurrently.
Static and dynamic macroeconomic models. Theories of consumption, investment, money demand and supply. Rational expectations and the government budget constraint.

813B. Macroeconomics II
Spring. 3(3-0)

P: EC 813A.
New classical theories of business cycles and growth. Theories of price and wage rigidities, search, imperfect competition, and credit rationing in macroeconomic models. Asset pricing.

815. Economic Thought I
Fall. 3(3-0)

Ancient, scholastic, and mercantilist economic thought. Origins and development of classical political economy. Socialist, Romantic, and Marxist reactions to classicism.

816. Economic Thought II
Spring. 3(3-0)

German and English economic historicism. Austrian and general equilibrium economics. Neoclassical economics. Institutionalism. Origins and development of Keynesian economics. History of economic thought in retrospect.

817. The Industrial Revolution
Spring of even-numbered years. 3(3-0)

Preconditions that led to economic changes in agriculture and industry beginning in the eighteenth century.

819. Economic Role of Government
Spring. 3(3-0)

The legal system and legal foundations of economic structure and performance. Property rights, the taking issue, and compensation.

820. Econometrics I
Spring. 3(3-0) Interdepartmental with Agricultural Economics, and Statistics and Probability.

P: EC 801, STT 430.
The single equation regression model. Properties of least-squares estimators under various specifications. Multicollinearity, generalized least-squares, errors in variables, seemingly unrelated regressions. Identification and estimation in simultaneous equations models.

821. Econometrics II
Fall. 3(3-0) Interdepartmental with Agricultural Economics, and Statistics and Probability.

P: EC 820, STT 442.
Estimation and hypothesis testing. Asymptotic properties of optimization estimators. Analysis of cross-sectional economic data. Qualitative and limited dependent variables. Probit, logit, tobit, and sample selectivity. Duration models. Count data.

822. Econometrics III
Spring. 3(3-0) Interdepartmental with Agricultural Economics, and Statistics and Probability.

P: EC 820, STT 442.
Dynamic models and time series data. ARMA models. ARCH models. Unit roots, cointegration and error correction. Rational expectations models.

823. Applied Econometrics
Fall. 3(3-0)

P: EC 820.
Problems of estimating models and testing hypotheses from economic theory. Applications of various econometric models to economic problems.

827. Economic Forecasting
Spring. 2(2-0)

P: MBA 814. R: Open only to MBA students.
Concepts, sources, measurement, and forecasts of economic data. Forecasting techniques. Time series analysis and economic models. Uses of economic models and forecasts in business decision making.

829. The Economics of Environmental Resources
Fall. 3(3-0) Interdepartmental with Agricultural Economics, Resource Development, Forestry, and Park, Recreation and Tourism Resources. 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. Advanced Macroeconomics and Monetary Theory
Fall. 3(3-0)

P: EC 812B; EC 813B.
General equilibrium models of monetary economies. Money and growth. Monetary and financial models of the business cycle. Hyperinflation. Bubbles, sunspots, cycles, and multiple equilibria.

831. Problems in Monetary Theory and Policy
Spring. 3(3-0)

P: EC 809 or EC 813A; EC 820.
Empirical models of money, output, prices and interest rates. Goals and techniques of monetary policy.

835. Public Expenditures
Fall. 3(3-0)

P: EC 805 or EC 812A.
Allocative and distributional effects of public expenditure. Public goods and externalities. Selected topics in public expenditure analysis such as cost-benefit analysis, fiscal federalism, mechanism design, public choice, general equilibrium models.

836. Public Revenues
Spring. 3(3-0)

P: EC 805 or EC 812A.
Theory of taxation. Allocative and distributional effects of taxation, user charges, and deficit finance. Positive and normative aspects. General equilibrium models. Dynamic models. Issues of fiscal federalism.

840. International Trade: Theory and Commercial Policy
Fall. 3(3-0)

P: EC 805 or EC 812A.
Commodity composition of trade. Welfare and distributional effects. Measures such as tariffs, quotas, and export subsidies. International economic policy. Theory and practice of regional economic integration.

841. Exchange Rates and Capital Flows
Spring. 3(3-0)

P: EC 805, EC 809; or EC 812A, EC 813A.
The balance of payments statement. Mechanisms of balance of payments adjustment. Exchange rate determination. Domestic policies under alternative exchange rate regimes. Regional monetary integration. The international currency system.

842. Managerial Economics and Public Policy
Fall. 3(3-0)

R: Open only to MBA students in the Advanced Management Program.
Analysis of the firm. Demand and revenues, optimal production, cost minimization, supply, profitability, and pricing. Competitive forces and public policies in the firm's regional and international markets.

850. Growth, Development, and Human Resources
Fall. 3(3-0)

P: EC 805 or EC 812A.
Theory and measurement of long-run growth. Population growth, technological change, capital formation, urbanization, entrepreneurship, and structural change.

851. Domestic and Foreign Development Policies
Spring. 3(3-0)

P: EC 805, EC 809; or EC 812A, EC 813A.
Problems of economic development. Market formation, financial markets and monetary policy, fiscal policy, investment criteria and externalities, trade policy, foreign capital, international disequilibrium.

852. Macroeconomics
Spring. 3(3-0)

R: Open only to MBA students in the Advanced Management Program.
Determinants of the national income, employment, and inflation. National income accounting. Analysis of business fluctuations, fiscal and monetary policy, international trade, and capital flows.

860. Market Structure and Behavior

Fall, 3(3-0)

P: EC 805 or EC 812A.

The consequences of concentration and entry conditions. Theory of the firm as it relates to size, scope, integration, motivation. Static market behavior. Antitrust treatment of cartels and mergers.

861. Dynamic Market Behavior and Performance

Spring, 3(3-0)

P: EC 805 or EC 812A.

Theoretical and empirical treatments of dynamic aspects of industry behavior. Strategic behavior, predation, and antitrust treatment. Research, development, innovation. Government controls. Public utilities and regulation.

880. Labor Economics I

Fall, 3(3-0)

P: EC 805 or EC 812A.

Labor supply and measurement of the labor force. Labor demand. Mobility, turnover, and migration. Equalizing wage differentials. Trade union growth, goals, bargaining and effects.

881. Labor Economics II

Spring, 3(3-0)

P: EC 805, EC 809; or EC 812A, EC 813A.

Theories of human capital. Internal labor markets and the economics of personnel. Economics of discrimination. Wage distributions. Job search and matching. Macroeconomic issues.

895. Graduate Reading in Economics

Fall, Spring, Summer, 1 to 3 credits. A student

may earn a maximum of 6 credits in all enrollments for this course.

Faculty guided research projects.

911. Strategic Behavior in Economic Environments

Fall, 3(3-0)

P: EC 812B.

Topics in cooperative and non-cooperative game theory. Applications include: oligopoly and bargaining theories, strategic voting and principal agent models, endogenous coalition formation, signalling, strategic trade, and auctions theories.

912. Risk, Uncertainty and Information

Spring, 3(3-0)

P: EC 812A.

Effects of risk in economic environments. Topics include: expected utility theory, risk aversion, stochastic dominance, mean-variance models, state preference models, general equilibrium models with risk, information theory.

923. Theory of Resource and Environmental Economics

Spring of even-numbered years, 3(3-0) Inter-

departmental with Agricultural Economics, Resource Development, Forestry, and Park, Recreation and Tourism Resources. Administered by Agricultural Economics. P: AEC 829, EC 805.

Economic theory of environmental change and control. Market and non-market allocation mechanisms. Temporal issues of conservation and growth. Contemporary issues in research 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 Ph.D. students in Economics.

**EDUCATIONAL
ADMINISTRATION**

EAD

**Department of Educational
Administration
College of Education**

315. Student Leadership Training

Fall, Spring, 3(2-2)

Student leadership role, skills, and technique, consistent with the principles and demands of a democratic multicultural society.

451. Models of Special Education Administration and Services

Spring, 3 credits. Interdepartmental with

Counseling, Educational Psychology and Special Education. Administered by Counseling, Educational Psychology and Special Education.

R: Open only to students admitted to the teacher certification program in emotional impairment or learning disabilities or to master's students in the Special Education major.

Application of theory and research to special education program design and implementation.

SA: CEP 851

800. Organization Theory in Education

Fall, Spring, Summer, 3(3-0)

Organizational theory and research applied to educational administration. Topics include comparative organization settings, external environments, organizational effectiveness, and ethics.

801. Leadership and Organizational Development

Spring, Summer, 3(3-0)

Interaction of leadership with organizational culture and development within a variety of educational organizations.

802. Staff and Professional Development

Spring, 3(3-0)

Staff and professional development interventions in educational organizations.

803. Planning, Budgeting, and Evaluation

Spring, Summer of even-numbered years. .

(3-0)

Planning, budgeting, and evaluation in educational organizations. Topics include needs assessment, funding sources, and processes for estimating costs and revenues.

804. Administration of Human Resources in Education

Fall, Summer, 3(3-0)

Tasks of personnel management in schools, colleges, and other educational organizations, including recruitment, selection, orientation, development, compensation, and evaluations. Focus on attracting and retaining a quality workforce in education.

813. Education, Development and Social Change

Spring of odd-numbered years, 3(3-0) Inter-

departmental with Teacher Education.

Rise of modern systems of education in developed and developing countries. Education, the state, and national development. Colonial heritage, linkages, and globalization of educational development.

852A. Elementary and Middle School Administration

Fall, Summer, 3(3-0)

Administration and supervision of elementary and middle schools. Alternative organizational arrangements, curricula, and practices. Problems and strategies for improving K-8 education.

852B. Secondary School Administration

Fall, Summer, 3(3-0)

Administration and supervision of secondary schools. Alternative organizational arrangements, curricula, and practices. Problems and strategies for improving secondary schools.

853A. Legal, Fiscal, and Policy Environment of Schools

Fall, Summer, 3(3-0)

External determinants of school policy and practice. Nature of policy-making process. History of school finance. Effect of fiscal policy on education. Equity issues. Impact of constitutional, legislative, and administrative requirements.

853B. Schools, Families, and Communities

Fall, Summer of odd-numbered years, 3(3-0)

Comparative and historical analysis of education within the broader social context. Families, communities, and the private sector. Social problems, social policies, and school practice.

853C. Instructional Supervision

Spring, Summer, 3(3-0)

P: EAD 800.

Supervision and evaluation of teaching and learning, and strategies for improvement of K-12 education.

855. Research in Educational Administration

Fall, Spring, Summer, 3(3-0)

P: CEP 822, EAD 800.

Applications of research techniques to educational organizations. Developing research proposals, conducting research, and writing formal papers.

858. Special Education Law

Fall of even-numbered years, 3 credits. Inter-
departmental with Counseling, Educational Psychology and Special Education. Administered by
Counseling, Educational Psychology and Special Education.

R: Open only to seniors or graduate students.

Analysis of State and Federal regulations, guidelines and court decisions related to special education and examination of their impact.

860. The Concept of the Learning Society

Fall, Summer, 3(3-0)

Lifelong education in the United States and other countries. Origins, forms, purposes, sponsors, content, and theory.

861A. Adult Learning

Fall, Summer, 3(3-0)

P: EAD 860.

Adult development and life transitions. Motivation and barriers to participation. Theories of adult learning.

861B. Strategies for Teaching Adults

Spring, 3(3-0)

P: EAD 861A.

Assessing program goals, setting expectations, developing resources, choosing strategies, and evaluating outcomes.

861C. Literacy in the Community and Workplace

Spring of odd-numbered years, 3(3-0)

Psychological, sociological, economic and political implications of illiteracy. Literacy campaigns and specific approaches to reducing illiteracy. Workforce literacy programs and techniques in schools, business, industry and labor.

862A. Training in Industry

Fall, 3(3-0)

P: EAD 860.

Factors influencing the development of education and training in business and industry. Relevance of training and development models to adult educators.