

**810 Introduction to Descriptive and Analytical Epidemiology**  
Fall. 3(3-0) R: Open only to master's students in the Epidemiology major or approval of department. SA: HM 810

Study of disease from a population perspective as the interaction of host, agent, and environment. Fundamental concepts include case definition, measuring frequency of disease, mortality and morbidity data, and major study designs.

**812 Causal Inference in Epidemiology**  
Fall. 3(3-0) P:NM: (EPI 810 and LCS 829) R: Open only to master's students in the Epidemiology major or approval of department. SA: HM 812

Causal models, criteria, and causality related to study design and analysis in epidemiology. Application of theoretical concepts to the design, analysis, and assessment of epidemiologic research.

**813 Investigation of Disease Outbreaks**  
Fall, Spring, Summer. 3 credits. P:NM: (EPI 810 or concurrently) R: Open only to master's students in the Epidemiology major or approval of department. SA: HM 813

Principles of and practice in investigating disease outbreaks. Field trips required.

**814 Nutritional Epidemiology**  
Fall of odd years. 3(3-0) P:NM: (EPI 810 or concurrently) R: Open only to master's students in the Epidemiology major or approval of department. SA: HM 814

Methodologies used in epidemiologic studies of diet and health in the context of U.S. and international dietary patterns. Relationship between diet and specific diseases.

**815 Epidemiology of Cardiovascular Disease**  
Spring of even years. 3(3-0) P:NM: (EPI 810) R: Open only to master's students in the Epidemiology major or approval of department.

Survey of methodologies used in epidemiologic studies of cardiovascular diseases. Review of evidence of genetic, environmental, and behavioral causes of cardiovascular disease.

**816 Reproductive and Perinatal Epidemiology**  
Summer of odd years. 3(3-0) P:NM: (EPI 810 or concurrently) R: Open only to master's students in the Epidemiology major or approval of department. SA: HM 816

Epidemiology of adverse health states in pregnancy and the puerperium. Impact of these health states on subsequent child development.

**817 Epidemiology of Communicable Diseases**  
Fall of even years. 3(3-0) P:NM: (EPI 810) R: Open only to master's students in the Epidemiology major or approval of department. SA: HM 817

Application of principles of epidemiology to research in communicable diseases relevant to public health in the U.S. and other countries.

**818 The Epidemiology of Zoonotic Diseases**  
Spring of odd years. 3(3-0) Interdepartmental with Veterinary Medicine. P:NM: (EPI 810) R: Open only to master's students in the Epidemiology major or approval of department. SA: HM 818

Human susceptibility to diseases of animals. Modes of transmission, surveillance, and strategies for prevention of specific zoonotic diseases.

**819 Spatial Epidemiology and Medical Geography**  
Summer of even years. 3(3-0) Interdepartmental with Geography. P:NM: (EPI 810) R: Open only to master's students in the Epidemiology major or approval of department. SA: HM 819

Concepts, techniques, and utilization of spatio-epidemiologic analyses for human health.

**820 Evidence-Based Medicine**  
Fall. 3(3-0) Interdepartmental with Medicine. P:M: (EPI 810 or concurrently and STT 421 or concurrently)

Methodology of clinical epidemiology and health services outcomes research. Linkage of epidemiology with daily clinical problems.

**821 Epidemiology of the Health and Cognitive Status of the Elderly**  
Fall of odd years. 3(3-0) Interdepartmental with Family Practice. P:NM: (EPI 810 or concurrently) R: Open only to master's students in the Epidemiology major or approval of department. SA: FMP 821, HM 821

Interpretation of research on the health and cognitive status of elderly. Interpretation of statistical tests of hypotheses. Conclusions based on data.

**822 Environmental Epidemiology**  
Fall of odd years. 3(3-0) P:M: (EPI 810 or concurrently and STT 421 or concurrently) RB: Basic science in biology, physiology, immunology R: Open only to graduate students in the Department of Epidemiology or approval of department.

Epidemiology of health effects and risk communication.

**823 Cancer Epidemiology**  
Fall of even years. 3(3-0) P:M: (EPI 810 and STT 421) R: Open only to master's students in the Epidemiology major or approval of department. SA: HM 823

Basic principles of carcinogenesis. Major etiologic factors, types of malignancies, and biomarkers for susceptibility and exposure. Prevention and early detection of cancer.

**824 Reproductive Epidemiology**  
Fall of even years. 3(3-0) P:M: (EPI 810 or concurrently and STT 421 or concurrently) RB: Social science or biological science R: Open only to graduate students in the Department of Epidemiology or approval of department.

Epidemiology of reproductive events.

**825 Epidemiologic Modeling**  
Spring of odd years. 3(3-0) Interdepartmental with Physics. P:NM: (EPI 810 and STT 422) R: Approval of department. SA: HM 825

Mathematical modeling of epidemics. Stochastic and chaotic systems approaches. Applications through personal computer software.

**826 Research Methods in Epidemiology**  
Fall. 3(3-0) P:M: (STT 422) R: Open only to master's students in the Epidemiology major. SA: HM 826

Analyses of epidemiologic and clinical data applying statistical methods, based on logistic and survival models, using standard software.

**827 The Nature and Practice of Scientific Integrity**  
Spring. 3(3-0) P:M: (EPI 810)

Historical development of where and how science is practiced in the United States. Scientific culture, sociology, and ethical standards. Principles, standards, and practices which define scientific integrity and responsible research conduct.

**829 Design and Conduct of Epidemiological Studies and Clinical Trials**  
Spring. 3(2-2) Interdepartmental with Large Animal Clinical Sciences. Administered by Department of Large Animal Clinical Sciences. P:NM: (VM 533) or approval of department. R: Open only to graduate students in the colleges of Human Medicine, Osteopathic Medicine, or Veterinary Medicine.

Applied analytical methods in experimental design. Assessment of health and disease status of animal and human populations. Risk assessment and interpretation of clinical trials.

**890 Independent Study in Epidemiology**  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P:NM: (EPI 810) R: Open only to master's students in the Epidemiology major. Approval of department. SA: HM 890

Independent study in areas relevant to epidemiology such as population genetics.

**899 Master's Thesis Research**  
Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Open only to master's students in the Epidemiology major. Approval of department. SA: HM 899

Master's thesis research.

## EXECUTIVE MBA PROGRAM

EMB

### The Eli Broad College of Business and The Eli Broad Graduate School of Management

**801 Business as an Institution**  
Fall. 2(2-0) R: Open only to students in the Executive M.B.A. Program. SA: MGT 808

Institutional goals and control of the business enterprise. Positioning of the firm in the marketplace. Ethical foundations of business.

**802 Accounting and Financial Concepts**  
Fall. 2(2-0) R: Open only to students in the Executive M.B.A. Program. SA: ACC 802 C: EMB 812 concurrently.

Financial statement relationships and analysis. Cash flow and working capital measurement and analysis. Contemporary financial reporting issues.

## Executive MBA Program—EMB

- 811 Organization Design and the Management of Change**  
Fall. 2(2-0) P:NM: (EMB 801) R: Open only to students in the Executive M.B.A. Program. SA: MGT 819

Alternative methods of organization. Dividing tasks and coordinating divided parts. Strategies for implementing new organizational forms and for changing strategies in general.

- 812 Managerial Accounting and Information Systems**  
Fall. 3(3-0) P:M: (EMB 802 or concurrently) R: Open only to students in the Executive M.B.A. Program. SA: ACC 812

Use of accounting data for planning, performance evaluation, and control. Costing and pricing. Relevant revenue and cost-based decision making. Information systems in business operations.

- 820 Marketing Management**  
Spring. 2(2-0) SA: MSC 822, MSC 823, MSC 820

Concepts, methods, and applications of decision-making to address marketing issues such as market segmentation and positioning, new product development, promotional and distribution strategies. Techniques to model and analyze marketing decision problems to ensure optimal performance results.

- 821 Financial Management**  
Spring. 3(3-0) P:NM: (EMB 802) R: Open only to students in the Executive M.B.A. Program. SA: FI 821

Managerial finance covering short-, intermediate- and long-term problems. Financial planning and control using financial theory and management techniques. Applications in domestic and international settings.

- 822 Supply Chain Management**  
Spring. 3(3-0) R: Open only to students in the Executive MBA Program. SA: MSC 822, MSC 823, MSC 820

Integrative approach to product design, development, and delivery. Flow of products from concept development through delivery to the final user, including product and process development, managing information and product flows, total quality management, and resource and capacity management.

- 828 Strategic Planning**  
Spring. 2(2-0) R: Open only to students in the Executive M.B.A. Program. SA: ML 818, MTA 818, MSC 818

Models and methods of business planning. Relationship of strategic intent, business missions and planning hierarchies. Linking marketing, financial, and human resource strategic plans.

- 831 Business Legal Environment**  
Summer. 2(2-0) R: Open only to students in the Executive M.B.A. Program. SA: GBL 859

Critical analysis of government regulation of business from legal, political, and social perspectives. An examination of moral concepts and social policy underlying government regulation.

- 836 Management in the Global Marketplace**  
Summer. 4(1-6) R: Open only to students in the Executive M.B.A. Program. SA: MGT 836, MSC 836

Global, comparative, and cross-cultural aspects of business. Drivers of global markets and consequences for management. International travel required.

- 842 Managerial Economics and Public Policy**  
Fall. 3(3-0) R: Open only to students in the Executive M.B.A. Program. SA: EC 842

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.

- 844 Leadership: An Executive Challenge**  
Fall. 2(2-0) R: Open only to students in the Executive M.B.A. Program. SA: MGT 839

Motivating others toward a shared vision. Classic and popular theories of leadership. Fundamental practices of exemplary leadership. Examination of personal leadership styles and development of a personal plan for leadership development.

- 845 New Technology and Products Management**

Fall. 2(2-0) R: Open only to students in the Executive M.B.A. Program. SA: MSC 832  
Strategic management of new product development processes. Planning, analytical, and decision-making concepts and tools available to market and brand managers. Global new product management best practices, product strategy and policy, introductions, product portfolio management, and organizational implications.

- 847 Managerial Decision Support Models**  
Fall. 3(3-0) R: Open only to students in the Executive M.B.A. Program. SA: MGT 847, MSC 847

Development and application of analytical models to support decision making. Topics include data analysis and multiple regression, linear optimization, decisions under uncertainty, forecasting, risk and decision analysis.

- 852 Macroeconomics in a Global Economy**  
Spring. 3(3-0) R: Open only to students in the Executive M.B.A. Program. SA: EC 852

Measurement, determinants, and forecasting of national income, employment, interest rates, and inflation. Analysis of business fluctuations, fiscal and monetary policy, international trade, and capital flows.

- 855 Labor and Management Relations**  
Spring. 2(2-0) Interdepartmental with Labor and Industrial Relations. R: Open only to students in the Executive M.B.A. Program. SA: MGT 855

Industrial relations in American union and management collective bargaining. Compensation issues. Grievance concepts and arbitration. Dispute resolution.

- 856 Organizational Behavior and Human Resource Management**

Spring. 3(3-0) R: Open only to students in the Executive M.B.A. Program. SA: MGT 846

Management of human resources. Organizational culture, motivation, communications, employee perceptions, individual and organizational learning. Staffing, interviewing, training, development, appraisal, terminating, and legal issues.

- 858 Financial Strategies**  
Spring. 2(2-0) R: Open only to students in the Executive M.B.A. Program. SA: FI 858  
Formulation and analysis of corporate strategies aimed at the creation and transfer of shareholder value.

Relationship of corporate activities to overall firm performance and valuation.

- 891 Special Topics in Executive Management**  
Spring. 2 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to students in the Executive M.B.A. program. Approval of college.

Faculty-supervised study in special topics relevant to business executives.

## FAMILY AND CHILD ECOLOGY

FCE

### Department of Family and Child Ecology College of Human Ecology

- 145 The Individual, Marriage and the Family**  
Fall, Spring. 3(3-0) R: Open only to freshmen or sophomores.

Development of the young adult in the human ecological context. Issues of sexuality, gender, parenting, work and family interface, communication, and resource use. Diversity in relationships and families.

- 211 Child Growth and Development: Conception Through Early Childhood**  
Fall, Spring. 3(3-0) R: Not open to freshmen.

Physical, cognitive, social, emotional, and ecological aspects of human growth and development from conception through early childhood.

- 211L Child Growth and Development Laboratory**  
Fall, Spring. 1(0-3) P:M: (FCE 211 or concurrently or PSY 244) R: Not open to freshmen.

Observing and recording the behavior and development of young children.

- 212 Children, Youth and Family**  
Fall, Spring. 3(3-0)

An ecosystems perspective on development during childhood and adolescence emphasizing family and community contexts.

- 225 Ecology of Lifespan Human Development in the Family**  
Fall, Spring. 3(3-0) R: Not open to seniors.

Human development across the lifespan with an ecological perspective. Relationships between human resource professionals and family systems.

- 238 Personal Finance**  
Fall, Spring, Summer. 3(3-0)

Strategies, techniques and resources useful in the management of personal finance.

- 270 Introduction to Family Community Services**  
Fall, Spring. 4(3-2)

Family community services from an ecological perspective. Professional orientation and factors influencing the field. Participation in community agency required.

- 280 Community as Context for Individual and Family Development**  
Fall, Spring. 3(2-2)

Families' and individuals' fit within a community over their life span from an ecological perspective. Analysis of change. Influence of context on development and its implications for family community services. Community observations required.