

**852 SAS Programming II: Data Management and Analysis**  
Spring. 1(1-0) P:M: (EPI 851) R: Open only to graduate students in the Epidemiology major or approval of department.

A programming approach to plan and write SAS programs to solve common data management and data analysis problems.

**853 SAS Programming III: Research Data Analysis Using SAS**  
Summer. 1(1-0) P:M: (EPI 852) R: Open only to graduate students in the Epidemiology major or approval of department.

A programming approach to plan and write SAS programs to solve data management and data analysis problems in research settings.

**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. RB: (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.

**910 Themes in Contemporary Epidemiology**  
Fall of odd years. 3(3-0) RB: Master of Science in Epidemiology

Discussion and critique of important contemporary themes in epidemiology as reflected in current publications in the field.

**915 Advanced Survival Analysis**  
Spring of odd years. 3(3-0) Interdepartmental with Statistics and Probability. RB: (EPI 810 and EPI 826 and EPI 852)

Methods of analysis of time to event data parametric and nonparametric models, frailty models.

**920 Advanced Methods in Epidemiology and Applied Statistics**  
Spring of even years. 3(3-0) Interdepartmental with Statistics and Probability. P:M: (EPI 826)

Pattern recognition and cluster analysis, longitudinal data analysis, path analysis, repeated measures and time-series analysis.

**925 Modeling in Epidemiology I**  
Fall of odd years. 3(3-0) P:M: (EPI 910) RB: Experience in statistical analysis of biological data.

Critical examination of epidemiological thinking about the determinants of non-communicable diseases.

**930 Modeling in Epidemiology II**  
Spring of even years. 3(3-0) P:M: (EPI 910 and EPI 925) RB: Mathematics through calculus.

Critical examination of epidemiological thinking about the determinants of communicable diseases and illnesses with both communicable and non-communicable causes.

**935 Research Seminar**  
Spring of even years. 3(3-0) P:M: (EPI 810 and LCS 829 and EPI 812) RB: Master of Science in Epidemiology or equivalent.

Conceptualization, development, and writing of research proposals in epidemiology and other forms of clinical field research.

**940 Epidemiological Consultations**  
Spring of odd years. 3(3-0) P:M: (EPI 810) RB: Master's level training in epidemiology or biostatistics

Practical training in providing research consultations in epidemiology and biostatistics.

**945 Molecular Epidemiology**  
Fall of even years. 3(3-0) P:M: (EPI 910 or concurrently)

Strategies for incorporation of genetic and non-genetic biomarkers in epidemiology.

**950 Advanced Biostatistical Methods in Epidemiology**  
Fall of even years. 3(3-0) P:M: (EPI 920)

In-depth study of specific biostatistical methods and epidemiology applications.

**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 Epidemiology.

Doctoral dissertation research.

**811 Organization Design and the Management of Change**  
Fall. 2(2-0) Fall: MSU Management Educa. RB: (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**  
Fall. 3(3-0) Fall: Troy, MSU Management. 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) Spring: Troy, MSU Mgt Ed Cen. 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) Spring: Troy, Mgt. Educ. Cen. RB: (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**  
Fall, Spring. 3(3-0) Fall: Troy, MSU Mgt Ed Ctr. Spring: Troy, MSU Mgt Ed Ctr. 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. Product and process development, managing information and product flows. Total quality management. Resource and capacity management.

**828 Strategic Marketing**  
Fall. 2(2-0) Fall: Troy, MSU Mgt Ed Ctr. 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 Law and Business**  
Fall. 2(2-0) Fall: Troy, MSU Mgt Ed Ctr. 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. Moral concepts and social policy underlying government regulation.

## **EXECUTIVE MBA                      EMB PROGRAM**

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

**801 Business: A Strategic Perspective**  
Fall. 2(2-0) Fall: MSU Management Ed. Cntr., Troy. 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) Fall: Troy, MSU Management Education Center. 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

- 836 Management in the Global Marketplace**  
Summer. 3(3-0) Summer: Troy, MSU Mgt Ed Ctr. 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**  
Spring. 2(2-0) Spring: Troy, MSU Mgt Ed Ctr. 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) Fall: Troy, MSU Mgt Ed Ctr. 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) Fall: Troy, MSU Mgt Ed Cen. 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) Fall: Troy, MSU Mgt Ed Ctr. 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. 2 to 3 credits. Spring: Troy, MSU Mgt Ed Ctr. 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) Spring: MSU Management Education Center, Troy. 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 Resources Management**  
Summer. 2 to 3 credits. Summer: Troy, MSU Mgt Ed Ctr. 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) Spring: Troy, MSU Mgt Ed Cen. 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.

- 861 Strategic Management of Information Technologies**  
Spring. 2 to 3 credits. Spring: Troy, MSU Mgt Ed Ctr. R: Open only to students in the Executive M.B.A. Program.

Impact of advances in information technology on business models, organization structures and processes, and methods for sustaining innovation. Estimation and realization of the business value of information technologies.

- 863 Strategic Management**  
Spring. 2 to 3 credits. Spring: Troy, MSU Mgt Ed Ctr. R: Open only to students in the Executive M.B.A. Program.

Determination of the strategic direction of the firm and management of strategic processes in the firm. Integration of environmental factors, industry dynamics, organizational resources, and management functions in the analysis and solution of strategic issues. Business-level strategy. Strategic management of firms with diversified product and global operations.

- 865 Business Ethics and Professional Responsibility**  
Spring. 2(2-0) Spring: Troy, MSU Mgt Ed Ctr. R: Open only to students in the Executive M.B.A. Program.

Alternative ethical prescriptions for business and for enterprise managers and their evolution with globalization of the markets. Societal expectations of what constitutes responsible and irresponsible business behavior. Government regulation and changes in corporate governance as alternatives to conformity to ethical prescriptions. Negotiation and reconciliation of conflicting ethical prescriptions, governance procedures, and the regulatory environment.

- 891 Special Topics in Executive Management**  
Fall, Spring, Summer. 1 to 3 credits. Fall: Troy, MSU Mgt Ed Ctr. Spring: Troy, MSU Mgt Ed Ctr. Summer: Troy, MSU Mgt Ed Ctr. 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.

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.

- 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. 3(3-0)

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.

- 320 Interaction Processes with Children in Groups**  
Fall, Spring. 3(3-0) P:M: (FCE 211) R: Open only to students in the Department of Family and Child Ecology or Graduate Lifelong Education students pursuing additional endorsement in Early Childhood Education. C: FCE 320L concurrently.

Principles of verbal and non-verbal interaction in relation to children's behavior in groups. Focus on young children in early childhood programs.