803 Human and Ecological Health Assessment and Management
Spring. 3(3-0) P:M: (ESP 801 and ESP 802) 
R: Approval of college. SA: SSC 805
Concepts and techniques used to evaluate human and ecological health impacts from anthropogenic activities. Policy formulation and management strategies to mitigate health effects.

804 Environmental Applications and Analysis
Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Bachelor’s or Master’s in appropriate discipline for specialization. R: Approval of college SA: SSC 806
Global, regional and local environmental issues. Use of systems approach to identify and solve environmental problems.

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) R: (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. R: (EPI 810 or concurrently) R: Open only to master’s students in the Epidemiology major or approval of department. SA: HM 814
Principles of and practice in investigating disease outbreaks. Field trips required.

814 Nutritional Epidemiology
Fall of odd years. 3(3-0) R: (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
Fall of even years. 3(3-0) R: (EPI 810) R: Open only to master’s students in the Epidemiology major or approval of department. SA: HM 815

816 Perinatal Epidemiology
Summer of odd years. 3(3-0) R: (EPI 810) R: Open only to graduate students in Epidemiology 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) R: (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) R: (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) R: (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
Spring of even years. 3(3-0) R: (EPI 810 or concurrently) R: Open only to master’s students in the Epidemiology major or approval of department. SA: HM 821
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) R: (EPI 810 or concurrently) R: Open only to master’s students in the Epidemiology major or approval of department. SA: HM 822
Epidemiology of health effects and risk communication.

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

823 Cancer Epidemiology
Spring of odd years. 3(3-0) R: (EPI 810) R: Open only to master’s students in the Epidemiology major or approval of department. SA: HM 823

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

826 Research Methods in Epidemiology
Fall. 3(3-0) R: (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) R: Open only to master’s students in the Epidemiology major. SA: HM 827
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. Permission of department: R: Open only to graduate students in the colleges of Human Medicine, Osteopathic Medicine, or Veterinary Medicine. 

830 Epidemiology of Foodborne Diseases and Food Safety: An Overview  
Fall. 3(3-0) Interdepartmental with Large Animal Clinical Sciences. Administered by Department of Large Animal Clinical Sciences. Permission of department: R: Approval of department. 
Epidemiologic survey of important foodborne diseases addressing recent trends. Sources of surveillance data. Measurement and management of risk factors associated with major foodborne diseases. Tracking foodborne pathogens from farm to table. 
Introduction to Hazard Analysis Critical Control Points (HACCP). 

835 Topics and Methods in Neuroepidemiology  
Summer of even years. 3(3-0) Interdepartmental with Neurology and Ophthalmology. 
Permission of department: R: (EPI 810) 
Epidemiology of neurologic conditions and discussion of the inherent difficulty in studying these disorders. 

847 Analysis of Survival Data  
Spring of even years. 3(3-0) Interdepartmental with Statistics and Probability. Administered by Department of Statistics and Probability. 
Permission of department: R: (STT 422 or STT 442 or STT 862) 
Analysis of lifetime data. Estimation of survival functions for parametric and nonparametric models. 
Censored data. The Cox proportional hazards model. Accelerated failure time models. 
Frailty models. Use of statistical software packages. 

851 SAS Programming I: Essentials  
Fall. 1(1-0) R: Open only to graduate students in the Epidemiology major or approval of department. 
A programming approach to plan and write simple SAS programs to solve common data management and data analysis problems. 

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. 
Permission of department: R: (EPI 810) R: Open only to master's students in the Epidemiology major. Approval of department. 
Consent of advisor: R: 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. 
Permission of department: R: HM 899 
Master's thesis research. 

910 Themes in Contemporary Epidemiology  
Fall of odd years. 3(3-0) R: 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. Permission of department: R: (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. 
Permission of department: R: (EPI 852) 
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) R: 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) R: 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 EPI 852) R: Master's level training 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) R: 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. 
Permission of department: R: Approval of department. 
Doctoral dissertation research. 

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: Troy. 
MU Management Ed. Cnr.; Troy. 
Permission of department: R: Open only to students in the Executive M.B.A. Program. 
Permission of department: R: 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. 
MU Management Education Center. 
Permission of department: R: Open only to students in the Executive M.B.A. Program. 
Permission of department: R: ACC 802 C: EMB 812 concurrently. 
Financial statement relationships and analysis. Cash flow and working capital measurement and analysis. 
Contemporary financial reporting issues. 

811 Organization Design and the Intellectural Model  
Fall. 2(2-0) Fall: Troy. 
MU Management Education Center. 
Permission of department: R: Open only to students in the Executive M.B.A. Program. 
Permission of department: R: 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. 
MU Management. 
Permission of department: R: Open only to students in the Executive M.B.A. Program. 
Permission of department: R: ACC 812 

820 Marketing Management  
Spring. 2(2-0) Spring: Troy. 
MU Mgt Ed Cen. 
Permission of department: R: Open only to students in the Executive M.B.A. Program. 
Permission of department: R: MGT 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 market decision problems to ensure optimal performance results.