EPIDEMIOLOGY AND PUBLIC HEALTH (EPH)

EPH 600. Introduction to Public Health. 3 Credit Hours.
This introductory course will provide students with the opportunity to explore and analyse contemporary public health issues and provide a history and a context that will allow students to better understand the field of public health, its core disciplines and their role as future public health professionals.
Requisite: Must be in either Program Plan, BSTS, EPID1, PREV, MDRP.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

EPH 601. Medical Biostatistics I. 4 Credit Hours.
Introduction to probability and statistics including descriptive statistics, tests of hypothesis, regression analysis, contingency tables, nonparametric tests, and life tables. Students gain hands-on experience in the analysis of medical data using several computer systems and at least one of the different statistical packages such as: BMDP, SAS, PSTAT, SYSTAT, and Minitab.
Requisite: Must be in either Program Plan, BSTS, EPID, EPID1, PREV, MDRP.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

EPH 602. Biostatistics II. 3 Credit Hours.
Continuation and elaboration of EPH601. Topics include design of factorial experiments, analysis of variance and variance components, multiple linear regression, and life tables.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 603. Medical Biostatistics. 3 Credit Hours.
This course is a hands-on introduction to biomedical research with a focus on collecting and analyzing patient data. Topics covered include: data security, visualization and analysis. Statistical topics include: probability, frequentist and Bayesian thinking, and both parametric and non-parametric statistical methods. Methods covered include: regression, contingency tables, and survival analysis techniques.
Prerequisite: MD/MPH Four Year/Regional Med Camp.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

EPH 604. Clinical Trials. 3 Credit Hours.
Planning, design, analysis, and data management for clinical therapeutic and prophylactic trials. Illustrations are provided through case examples.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

EPH 607. Interdisciplinary Health Communication. 3 Credit Hours.
Health communication is a critical tool for protecting and improving the health of people and their communities and is most effective when developed collaboratively using expertise from many disciplines. The focus of this course is the development of written, oral, and multimedia communication skills that will enable you to effectively communicate concepts and evidence-based scientific findings to diverse communities and professionals in health and other fields. Class time will largely be devoted to the development of these skills in the context of working effectively in interprofessional teams of approximately 5-6 students. Working collaboratively, students will develop teamwork skills and an awareness for the diversity of expertise that underpins effective interprofessional communication teams.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

EPH 608. Professional Development. 2 Credit Hours.
This 2-credit seminar will be dedicated to providing students with opportunities to gain experiences with professional skills such as job interviewing, public speaking, preparing budgets, grant proposal writing, and working with community organizations. The course will be interactive, where I will talk about skills that are important in the public health workforce and students will then practice the skills in pairs or groups. There will be no exams or quizzes; rather, students will be graded on public speaking, performance in a mock job interview, ability to write a mock grant application, developing a grant proposal budget, preparation of a CV/resume, and disseminating research findings to community stakeholders. Class will meet every Tuesday from 1 to 3:30 in CRB 989. Students should come ready to participate and to give constructive feedback to their peers. Each topic will be covered across 2 (and sometimes 3) class sessions, so that everyone has sufficient time to practice their skills and receive feedback.
Components: LEC.
Grading: SUS.
Typically Offered: Fall & Spring.

EPH 611. Mindfulness in Public Health and Medicine. 3 Credit Hours.
The stress of modern life can adversely impact physical and mental health functioning which may be ameliorated by the practice of mindfulness. Mindfulness is a mental state achieved by focusing one’s awareness on the present moment, while calmly acknowledging and accepting one’s feelings, thoughts, and bodily sensations. This practice is derived from Buddhist traditions more than 2,500 years old. In recent decades these practices have been adopted for use in United States and elsewhere and evidence is growing that these practices can reduce psychological symptomatology (e.g., symptoms of depression and anxiety), enhance resiliency in response to stressors, enhanced pain coping ability, and enhanced attentional regulation, among other benefits. The first half of this course will be devoted to the completion of an 8-week Mindfulness-Based Stress Reduction Course (MBSR) that will involve in-class activities and daily at-home mindfulness practice assignments. Students will maintain a journal documenting their “first-person” encounter with the practice of mindfulness. The second half of the course will be organized around a lecture format with weekly brief quizzes. Anonymous questionnaire data will be collected before, during and after completion of the MBSR course. These data will be used by student teams to evaluate the impact of MBSR on multiple outcomes. Groups will prepare a written report and present their findings to the class at the end of the semester.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.
EPH 612. Global Health. 3 Credit Hours.
This seminar examines current global public health issues, governance and decision-making challenges for the 21st Century across developing, transitioning, and developed countries. Topics of discussion include new actors for world health in the era of globalization; linking human development, poverty and health inequities; social, cultural and ethical considerations for health planning; role of industry, trade and public health; evidence based research for improved global health initiatives; foreign policy and health security challenges associated with emergence and re-emergence of infectious diseases and public and private partnerships in global health. Open only to EPH majors.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

EPH 613. Emerging Challenges in Global Health Systems. 2 Credit Hours.
Health systems around the world must respond to an evolving landscape of health risk and disease burden that is increasingly dominated by complex, chronic illness. Contrary to what is often espoused, chronic and non-communicable diseases affect both poor and rich. Yet, access to health services is highly inequitable creating immense divides and equity imperatives that have largely been ignored in global health. This course examines how global and national health systems - particularly in low and middle-incomes countries – can better face the changing burden of disease with a focus on equity and universal coverage.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 614. Global Outbreak. 3 Credit Hours.
This seminar examines current global public health issues and provides an overview of global outbreak investigations and disease surveillance. Participating in epidemiological/outbreak investigations in international settings provides unique opportunities to learn about health challenges in different ecologic, cultural and resource limited settings. This seminar will also allow students to gather insight into public health surveillance and understand the utility of the ongoing systematic collection, analysis and interpretation of data for use in planning and evaluation of public health intervention programs.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

EPH 616. Global Health and Global Justice. 3 Credit Hours.
Global health has emerged as a field distinct from older visions of international health, by focusing on macro-level problems caused by globalization whose origin and solution must transcend national boundaries. Yet global health has also challenged ethics to develop new accounts of justice in this changing world. This course will analyze global health from the lens of ethics. The course will introduce core theories of public health ethics (e.g. utilitarianism, statism and cosmopolitanism) to make sense of the rise of global justice as a distinct field of ethical inquiry. Armed with this conceptual foundation, we will then examine some of the central problems of global health, as well as proposed solutions to those problems. Such skills in argumentation will be increasingly critical for future public health leaders, yet too few public health students are exposed to ethical analysis. By applying ethical frameworks to analyze global health problems, students will gain critical skills in how to integrate distinct forms of knowledge, how to develop cogent normative arguments, and how to articulate and defend an account of fair decision-making and just policies in global health.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

EPH 617. Disease Prevention and Health Promotion. 3 Credit Hours.
This course will introduce students to the science of prevention and health promotion. More specifically, through didactic presentations, group discussions, article readings and critiques, and a term project, this course will focus on providing students with an overview of: the top preventable causes of disease in the U.S., the etiology of disease (with a focus on the top preventable causes of disease in the U.S.) across the lifespan, the role of prevention theories in the development of preventive interventions, and the role of methodology in prevention science. The course will also provide an overview of efficacious/effective preventive interventions, including (but not limited to): family community, and school level interventions. Examples from the fields of obesity, drug use, smoking, and HIV will be used to illustrate the course learning objectives detailed below.
Requisite: Must be in either Program Plan, BSTS, EPID, EPID1, PREV, MDRP.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

EPH 620. Health Education and Behavior. 3 Credit Hours.
Educational processes with special emphasis on the social and cultural determinants of health behavior, health education as a process of social change, and community based health education organizations. Open only to EPH majors.
Requisite: Must be in either Program Plan, BSTS, EPID, EPID1, PREV, MDRP.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 621. Fundamentals of Epidemiology. 3 Credit Hours.
Principles and methods of epidemiology. Descriptive epidemiology, environmental and other risk factors, detection of outbreaks, basic demography, and etiologic studies.
Requisite: Must be in either Program Plan, BSTS, EPID, EPID1, PREV, MDRP.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.
EPH 622. Obesity and Public Health. 3 Credit Hours.
Nearly two thirds of the United States is now considered overweight or obese and the associated medical costs are placing an unsustainable burden on our health care system. However, the issue of overweight/obesity extends beyond behavioral choices and medical costs. This course will take a deeper look at the complex interactions between our environment, behaviors, and policies, and how they jointly contribute to the obesity epidemic. This course will provide an interdisciplinary perspective of the biological, psychosocial, ecological, and economic determinants that contribute to obesity and the resulting pathways to chronic disease and disability. Finally, current evidence-based public health programs currently will be discussed to stimulate critical thinking necessary to implement effective obesity prevention and control programs.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 623. Determinants of Health and Health Disparities Across the Life Course. 3 Credit Hours.
This course builds on the concepts and methods examined in EPH 614, delving further into risk and protective processes related to health outcomes across the life course, from the prenatal period to older adulthood. Class readings and discussions will examine examples of common risk pathways contributing to various diseases, including pathways hypothesized to be related to health inequities and disparities, such as: economic and educational disadvantage, stress, sedentary behavior and poor behavioral regulation, social isolation. Common protective pathways that promote health are also reviewed, such as: positive parenting and family relations, and social support.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

EPH 625. Ethical Issues in Epidemiology. 3 Credit Hours.
The course identifies and analyzes ethical issues in epidemiologic practice and research. Issues include data acquisition and management, confidentiality, valid consent, advocacy, public policy, subgroup stigma, research sponsorship, conflicts of interest, communication of risk, and international and intercultural difference.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 631. Public Health Administration. 3 Credit Hours.
An overview of the historical background, philosophy, and purpose of public health. Relationship between government, law, and public health. Organization, management, and intergovernmental relationships of public health agencies in the United States at the federal, state, and local level. Basic principles of management, decision making, and prioritizing in public health are discussed. Overview of programs and services provided by public health organizations with emphasis on current public health issues and problems are also included. Open only to EPH majors.
Requisite: Must be in either Program Plan, BSTS, EPID, EPID1, PREV, MDRP.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

EPH 632. U S Health Systems. 3 Credit Hours.
This course provides an introduction to the multiple systems that define, describe, and shape the delivery of health care in the United States. Using case studies and presentations of major issues, this course will give the learner an appreciation of the dilemma confronting policy makers, providers, and patients: how to balance cost, quality, and access.
Requisite: Must be in either Program Plan, BSTS, EPID, EPID1, PREV, MDRP.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 639. Ecology and Control of Vector-Borne Diseases. 3 Credit Hours.
The course will provide students with an overview of the epidemiology of major vector-borne diseases in the U.S. (e.g., Lyme Disease, West Nile Virus) and globally (e.g., malaria, dengue, filariasis, leishmaniasis, and other arboviruses), field and lab-based methodologies for vector studies to incriminate vector species and assess transmission dynamics, vector and disease surveillance, and "cutting-edge" vector control technology. A major focus will be on the ecology of vectors in their local environments and how transmission dynamics are affected by changes in land use, urbanization, and climate. Students will learn about new WHO-approved strategies for Integrated Vector Management (IVM) and how they are applicable for the prevention and control of all vector-borne diseases.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 640. Urban Environment and Public Health. 3 Credit Hours.
Where we live, where we work, where we go, and how we get there may all impact our behaviors and ultimately our health and well-being. This course examines the urban environment - in particular, those aspects of urban/suburban/semi-rural environments created by humans. This includes how homes, neighborhoods, cities and regions impact public health challenges such as obesity, chronic disease, mental health, infectious disease, and injuries. This course will teach students to translate scientific findings to design healthy communities, and develop interventions to promote urban health. Students will learn how to map neighborhood characteristics such as food outlets, parks and walkability, and to develop recommendations for policymakers.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

EPH 641. Aspects of Environmental Health. 3 Credit Hours.
Interdisciplinary scope of environmental health problems. Development of a practical, dynamic model for integrating fundamental concepts from a variety of environmental disciplines. Open only to EPH majors.
Requisite: Must be in either Program Plan, BSTS, EPID, EPID1, PREV, MDRP.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.
EPH 643. Introduction to Occupational Health. 3 Credit Hours.
This course offers a general introduction to major concepts and issues in occupational health and safety from local to global, addressing fundamental topics and current controversies. The course covers core topics that prepare students to more fully understand and address occupational health issues: toxicology, exposure assessment, occupational epidemiology, risk assessment/risk management, prevention of workplace injury and disease, health promotion of adults and protection of worker populations from environmental hazards.

Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 644. Fundamentals of Program Evaluation. 3 Credit Hours.
Fundamentals of Program Evaluation was developed as a survey course directed specifically at providing an overview of the broad area of program evaluation. At its base, program evaluation is the investigator of a program’s characteristics and merits. In context of health care, the purpose of program evaluation is to provide information in the effectiveness of programs or interventions so as to optimize the outcomes, efficiency and quality of health care. Evaluation of a program is an essential part of the successful implementation and conduct of any health care project or intervention, and should ideally be designed along with the project itself. Program evaluation activities can use a wide range of methodologies (e.g., qualitative, quantitative), analyze different aspects of a program (e.g., structure, activities, organization), and have a large number of intended outcomes (e.g., achievement or program’s goals objectives, extent of program impact, program cost).

Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 646. Climate and Health. 3 Credit Hours.
There is an intricate relationship between climate and health. Climate changes directly affect health and well-being but also mediate the effects of socio-physical and biochemical changes in the environment on health and well-being. This course will help students unravel this intricate relationship between climate and health. A range of topics will be covered including: a) the etiology of disease with respect to climate change, b) shifting burden of disease and disability with respect to changing climate and climate-mediated changes in the environment, and c) application areas of climate-health linkages: unintentional injuries and climate change, vector-borne disease and climate change, heat-related mortality, disease of metabolic syndrome and climate change, cardiopulmonary, allergy and immunology disease due to bioaerosols and air pollution.

Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

EPH 647. Community Based Participatory Research. 3 Credit Hours.
Community-based participatory research (CBPR) is methodology, increasingly popular in public health and other disciplines, which invites community collaboration throughout the research process from conceptualization of study focus to dissemination of findings. This course will provide an opportunity for medical and graduate students to better understand the process by which community members and academic researchers work collectively to address health disparities and influence social change.
Requisite: Must be in either Program Plan, BSTS, EPID, EPID1, PREV, MDRP.

Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 648. Climate, Cool Cities, Healthy Communities. 3 Credit Hours.
In the current era of climate change and rapid urbanization, an understanding of the impacts of urban design, planning and policies on climate and human health in urban and suburban areas is critical. Drawing on diverse disciplinary perspectives, including public health, architecture, planning, and public policy and government and non-profit sectors, the course provides students with the ability to comprehend, synthesize, communicate, and apply evidence-based urban design principles in relation to current and future challenges of climate and health. Additionally, in accordance with the adage, “Think globally, act locally,” students will have the opportunity to interact with local experts who will share their knowledge of national and international policies and programs in the area of urban design, climate and health – while applying their learning to measure current challenges and inform policies of climate and health in the urban/suburban localities of the South Florida region.

Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 650. Health Economics for Evaluation and Policy. 3 Credit Hours.
This course centers on a discussion of the criteria used to evaluate the allocation of resources and analyze the behavior of two of the principal actors-consumers and firms. The principles of microeconomics are presented in the context of health care systems and markets. Numerous real-world issues and case studies are used to demonstrate economic decision-making techniques, especially for health care organizations and consumers.

Components: LEC.
Grading: GRD.
Typically Offered: Fall.

EPH 651. Research Methods. 3 Credit Hours.
Purpose of the course is to provide students with a sound understanding of the fundamental concepts and methods for conducting public health research. After a brief introduction to the philosophy of science, the major emphasis in the early portion of the course is on research conceptualization, design and measurement, with a particular focus on the logic of minimizing rival alternative explanations of finding for experimental and quasi-experimental studies.

Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

EPH 652. Health Policy. 3 Credit Hours.
Part I will examine seven models encompassing different perspectives on public health: philosophy, political theory and politics, law, economic, science and information culture and religion, and organization and management, including how they relate and their relevance in formulating, implementing, and evaluating public policy. Part II will examine the policy making process including how issues reach the government agenda, how laws are formulated, and how the process affects substance. Part III describes the core elements of policy analysis including: problem definition; background; political, economic, and social landscape; development of policy options; and recommendation. It will also include discussions of how to find and analyze documents and data as well as discuss the financing of health care.

Components: LEC.
Grading: GRD.
Typically Offered: Summer.
EPH 655. Health Economics and Financing. 3 Credit Hours.
Health economics studies economic principles, methods of decision making, and the allocation of resources within health care systems and markets. This course will provide students with an understanding of the flow of funds and services throughout the U.S. health care system and how the structure and financing of health care impacts population health status. We will use numerous real-world issues and case studies to demonstrate economic decision-making techniques, especially for health care organizations and consumers (patients, providers). Students are not expected to have familiarity with economic concepts and principles prior to taking this course. In addition, students are not expected to use calculus in this course. However, students are expected to have an understanding of basic algebra, and graphical analysis will be used often throughout the class. Prerequisite: MD/MPH Four Year/Regional Med Camp.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 656. Qualitative Research Methods. 3 Credit Hours.
The purpose of this course is to introduce students to the philosophical underpinnings of qualitative research and its practical application to the field of public health. Students will 1) develop an understanding of the significance and use of qualitative research methods in public health; 2) differentiate between numerous qualitative research approaches, including phenomenology, grounded theory, and ethnography; 3) describe different methods for collecting qualitative data, including interviews and focus groups; 4) develop skills in the collection, analysis and reporting of qualitative data; and 5) develop a basic understanding of how qualitative and quantitative research may be combined in mixed methodological approaches. The course will include a combination of lectures, presentations of applied qualitative research studies by guest experts, student presentations, and assignments designed to foster students' skills in formulating appropriate qualitative research questions, designing qualitative studies, collecting and analyzing qualitative data, and summarizing findings for publication. More specific details on the topics to be covered in this course are provided below.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.
EPH 663. Hospital Health Care Services and Access: An Interdisciplinary Inquiry. 3 Credit Hours.
Hospitals play a vital role in the health of the communities they serve. Yet, their accessibility and availability to those communities is often unequal, and significant racial and ethnic disparities exist in the utilization of hospital services, quality of care provided, health outcomes and patient experiences. Attention has been increasingly focused on creating sustainable solutions to attenuating these disparities. Initial steps include the examination of community and hospital data to identify inequalities in disease distribution, as well as utilization of care. Such data provides evidence to define critical areas of concern and provides a starting point for engagement with the community. The real work begins when hospitals work with community partners to engage in authentic and collaborative partnerships to address the needs and the health of the local citizens. This process, known as Community-Based Participatory Research (CBPR), can harness resources and build capacity to address health issues relevant to the community. This course will discuss the change that hospitals can achieve when they facilitate community-academic partnerships that bring together knowledge, expertise and interest of community partners with the research and training of clinicians and academic researchers.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 671. Maternal and Child Health. 3 Credit Hours.
Preventative and therapeutic concepts pertinent to the reduction of morbidity and mortality among mothers and their children.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 679. Learning Collaboratory. 3 Credit Hours.
This course is the first semester of a 4-semester program titled the "Public Health Learning Collaboratory”. The mission of this Department of Public Health Sciences (DPHS) program is to transform the learning experience of master of public health students by providing opportunities to develop core skills necessary for effective public health practice, while completing their capstone or thesis in the community. Organized in small groups around 4 thematic areas, students learn about substantive areas (e.g., prevention with children and families, access to health care, urban health, health in Latin America), while building competencies to successfully develop and implement projects in collaboration with community health organizations (e.g., community engagement, needs and capacity assessments, researching evidence based practices, teamwork and problem-solving skills, project planning, development and implementation skills).
Components: LEC.
Grading: SUS.
Typically Offered: Fall.

EPH 680. Practical Field Experience. 3 Credit Hours.
Practical field experience requirement for MPH students. Students are placed in health-related settings (local, national, and international) to work on projects of mutual interest to both the field organization and the student.
Components: FLD.
Grading: SUS.
Typically Offered: Fall, Spring, & Summer.

EPH 681. Capstone Experience Project. 3 Credit Hours.
The capstone project is intended to build upon EPH 680 field work and will provide students with an opportunity to apply public health academic theory and acquired skills to community health problems.
Components: LEC.
Grading: SUS.
Typically Offered: Fall, Spring, & Summer.

EPH 684. Special Topics. 1-3 Credit Hours.
This course is designed to allow the listing of special topics within the Department of Epidemiology and Public Health and cross-list topics with other departments’ offerings.
Components: LEC.
Grading: GRD.
Typically Offered: Fall, Spring, & Summer.

EPH 698. MSPH Thesis Proposal. 3 Credit Hours.
This is an independent study course. Students in the MSPH track may register for this course with an approval from the Capstone Manager and the Faculty Advisor. The purpose of this course is to develop the MSPH Thesis Proposal, form a thesis committee with at least two members: 1st reader (an expert in the field) and 2nd reader (the faculty advisor) and obtain proposal approval from the committee members. This MHPS Thesis Proposal is required and must be approved prior to start data collection and analysis.
Components: THE.
Grading: SUS.
Typically Offered: Fall, Spring, & Summer.

EPH 699. MSPH Thesis. 3 Credit Hours.
This is an independent study course. Students in the MSPH track may register for this course with an approval from the Capstone Manager and faculty advisor. The purpose of this course is to collect and analyze the data per thesis proposal, to prepare and write the thesis and deliver an oral presentation.
Components: LEC.
Grading: SUS.
Typically Offered: Fall, Spring, & Summer.

EPH 700. Professional Development Seminar. 1 Credit Hour.
This course covers fundamental topic areas in professional development for PhD students in the public health sciences. Topic areas include: presenting research at conferences, writing manuscripts for publication, preparing the dissertation, the PhD comprehensive exams, effective teaching and mentoring, and getting a job in academia. Through interactive workshops, in-class exercises, brief presentations and assignments, students will have an opportunity to practice and strengthen necessary skills, including effective communication (oral and written), conflict resolution, and developing collaborations.
Requisite: Academic Program Plan: BSTS, EPID, PREV.
Components: LEC.
Grading: SUS.
Typically Offered: Fall & Spring.
EPH 701. Innovations in Prevention Science Methodology. 1 Credit Hour.
This course is a part of series "Innovations in Prevention Science Methodology" which covers specialized topics in prevention science that have been identified as innovating the field. This course section addresses cross-sectional and longitudinal data analyses related to finite mixture models. In general, we will cover various types of mixture distributions. Topics in finite mixture modeling include latent class (profile) analysis (with continuous and categorical variables), univariate and multivariate mixture growth mixture analysis (with continuous and categorical variables), and model evaluations for these analytic methods. Mplus statistical software will be used. Students are expected to attend all classes and to complete all assignments.
Prerequisite: PSY 633. And must receive a B or Higher.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

EPH 703. Advanced Statistical Methods I. 4 Credit Hours.
Advanced statistical methods used in analyzing data from epidemiologic investigations. Topics include Mantel-Haenszel chi-square, interaction, standardization of rates, incidence density, logistics regression, and other special topics.
Prerequisite: EPH 601.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

EPH 705. Advanced Statistical Methods II. 3 Credit Hours.
Continuation and elaboration of EPH 703. Advanced statistical methods used in analyzing data from epidemiologic investigations. Topics include Kappa statistics, life tables, survival analyses, logistic regression, Poisson regression, log linear models, clusters, meta-analysis, and other special topics.
Prerequisite: EPH 703.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 711. Cancer Epidemiology. 3 Credit Hours.
This course covers the basic epidemiology of cancer. Major sites and exposures are stressed, highlighting descriptive, etiologic and preventive aspects. A major course project and one final exam are included.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 717. Integrating Behavior Health Theories and Models. 3 Credit Hours.
This course is designed to provide an opportunity for synthesis and integration of knowledge regarding the phenomenon of health behavior. The focus is on critical examination of theoretical and empirical work in the area of health behavior from a public health perspective.
Prerequisites: EPH 617 or EPH 620. Or Requisite: Permission of Instructor.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

EPH 720. Cardiovascular Disease Epidemiology and Prevention. 3 Credit Hours.
Course aims to teach and train MPH students in the epidemiology and prevention of cardiovascular and cerebrovascular diseases which are the leading causes of morbidity and mortality among the adult U.S. population. Essential knowledge for those working in the area of public health is emphasized.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 723. Epidemiology and Public Health Aspects of Diabetes Mellitus. 3 Credit Hours.
This course presents an overview of the epidemiology and public health impact of an important chronic disease, diabetes mellitus (DM). Topics include the classification and descriptive epidemiology of DM and associated health complications, disease screening, evaluation of risk factors, methodological issues associated with DM research, DM among special populations, and the public health impact of DM in the U.S.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 724. Molecular and Genetic Epidemiology. 3 Credit Hours.
This course covers the theoretical concepts and practical issues involved in conducting molecular and genetic epidemiology research involving human populations. Specifically, students will learn about: molecular and genetic technology; evaluating disease-associated genes, and their interaction with environmental factors; clinical research; and data mining techniques. Ultimately, students will develop a framework for study design, statistical power and sample consideration, assay evaluation and validation, and data interpretation using molecular and genetic epidemiology tools in their research.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 727. Climate, Environment, and Health: Data Integration and Management. 3 Credit Hours.
The course will introduce: a) different research designs needed to understand the linkages between climate/weather and health, and b) sources and types of data needed for different research designs. The course will train students in: a) the integration and management of weather/climate, environment and health data sets that have different spatiotemporal scales, b) assessment of errors and uncertainty in the collocation of these data sets, and c) visualization, interpretation and presentation of these data sets, including covariance structure in these data sets.
Prerequisite: EPH 601.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.
EPH 728. Social Epidemiology. 3 Credit Hours.
This course provides an overview and understanding of key concepts and theoretical frameworks relevant to the study of social determinants of population health and health disparities. The interdisciplinary course will cover methodological considerations and methods relevant to the field of social epidemiology, such as lifecourse epidemiology and multilevel determinants of health. A major emphasis will be on biological pathways by which social factors "get under the skin", and the role of social policies in improving population health. The course will involve lectures, presentation of epidemiologic research by faculty researchers, class discussions, and class projects.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 731. Developing, Adapting and Evaluating Interventions. 3 Credit Hours.
This course builds on the substantive and methodological competencies acquired in preceding prevention science courses by preparing students to develop and adapt preventive interventions.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

EPH 732. Introduction to Dissemination and Implementation Science. 3 Credit Hours.
This course provides an introduction to the theory and practice of Dissemination and Implementation (D&I) Sciences. Topics include the importance and language of D&I science; designs, methods and measures; differences and similarities across clinical, public health, and policy settings; selected tools for D&I research and practice; and future issues. The focus of this course will be on implementing prevention programs, strategies, and policies that are ready for application, testing and scale up, rather than developing interventions from scratch.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 740. Basic Pathology and Patho-physiology. 3 Credit Hours.
The course emphasizes basic patho-physiological mechanisms and diseases of particular interest to students of public health. Students obtain an understanding of basic pathological processes, nomenclature of pathological findings, and common natural and unnatural diseases affecting various body systems. Observations of autopsies and the gross pathology of selected organs are also incorporated in the course.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

EPH 751. Survival Analysis in Clinical Trials. 3 Credit Hours.
Statistical methods for analysis and interpretation of survival data arising from clinical trials. Topics include survival curves, estimation of sample size, survival curves, proportional-hazard models, time dependent variables, and prognostic indices.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 752. Advanced Research Methods. 3 Credit Hours.
This is a survey course in advanced quantitative methods for research and evaluation in prevention science. The course will provide students with an introduction to research methodology, matching research questions to specific methods, applying methods to real world data, and presenting the application of a method to a broader audience.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

EPH 774. Epidemiologic Methods and Reasonings. 3 Credit Hours.
This course will discuss epidemiological methods (e.g., study designs) and concepts (e.g., confounding, bias, interaction, random error) required to evaluate the totality of evidence in etiologic research. It will also discuss theoretical models of etiologic research and techniques for quantifying the magnitude of disease or other health indicators as well as the magnitude of study errors specific to study designs.
Prerequisite: EPH 601 and 621. And pre or corequisite: EPH 602.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

EPH 776. Methods in Epidemiology. 3 Credit Hours.
This course will discuss principles of epidemiologic methods. Introduction to causal inference and advanced epidemiologic topics will be covered. This course will be theoretical and quantitative and will include, when applicable, illustrative data examples using various statistical softwares.
Prerequisite: EPH 601 and 621. And pre or corequisite: EPH 602.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

EPH 782. Advanced Individual Study. 1-3 Credit Hours.
Individual work on a special project under faculty guidance.
Components: THI.
Grading: GRD.
Typically Offered: Fall, Spring, & Summer.

EPH 825. Continuous Registration--Master's Study. 1 Credit Hour.
To establish residence for MPH students who are preparing for project presentation. Credit not granted. Regarded as full time residence.
Components: THI.
Grading: SUS.
Typically Offered: Fall, Spring, & Summer.

EPH 830. Doctoral Dissertation. 1-12 Credit Hours.
Required of all candidates for the PhD. The student will enroll for credit as determined by his/her advisor but not for less than a total of 24. Not more than 12 hours of EPH830 may be taken in a regular semester, nor more than six in a summer session.
Components: THI.
Grading: SUS.
Typically Offered: Fall, Spring, & Summer.

EPH 840. Doctoral Dissertation- Post Candidacy. 1-12 Credit Hours.
Components: THI.
Grading: SUS.
Typically Offered: Fall, Spring, & Summer.
EPH 850. Research in Residence. 1 Credit Hour.
Used to establish research in residence for the Ph.D., after the student has been enrolled for the permissible cumulative total in appropriate doctoral research. Credit not granted. May be regarded as full-time residence as determined by the Dean of the Graduate School.

**Components:** THI.

**Grading:** SUS.

**Typically Offered:** Fall, Spring, & Summer.