**PUBLIC HEALTH (PUBH)**

**Explanation of Course Numbers**

- Courses in the 1000s are primarily introductory undergraduate courses.
- Those in the 2000-4000s are upper-division undergraduate courses that can also be taken for graduate credit with permission and additional work.
- Those in the 6000s and 8000s are for master’s, doctoral, and professional-level students.
- The 6000s are open to advanced undergraduate students with approval of the instructor and the dean or advising office.

**PUBH 0920. Continuing Research - Master’s. 1 Credit.**
Continuing Research Credit - Master’s Level.

**PUBH 0940. Continuing Research - Doctoral. 1 Credit.**
Continuing Research Credit - Doctoral.

**PUBH 1101. Introduction to Public Health & Health Svcs. 3 Credits.**
Introduction to aspects of public health and health services, including health services administration and policy, maternal and child health, environmental health, and health promotion.

**PUBH 1102. History of Public Health. 3 Credits.**
Historical and philosophical development of public health and its contributions to understanding, preventing, and controlling disease and disabilities.

**PUBH 2110. Public Health Biology. 3 Credits.**
Basic scientific mechanisms, concepts, and principles in health and the pathogenesis of diseases; a foundation for applications to public health. Prerequisite: BISC 1005 or BISC 1111.

**PUBH 2112. Principles of Health Education and Health Promotion. 3 Credits.**
Social and behavioral theories underlying health promotion program development and evaluation. Practical applications in a variety of domestic and global public health settings. Prerequisite or corequisite: PUBH 1101.

**PUBH 2113. Impact of Culture upon Health. 3 Credits.**
Relationships between cultural values and the development of modern health systems based on Western models of health care practice. Reliance upon traditional forms of health care. Examples of successful incorporation of traditional practices into evolving health care systems.

**PUBH 2114. Environment, Health, and Development. 3 Credits.**
Survey of the relationship between health and development and environmental trends. Topics include deforestation, urban contamination, and desertification.

**PUBH 2115. Health, Human Rights, and Displaced Persons. 3 Credits.**
Concepts of health as a human right, ethics, and the participation of the international community in moving toward health for all. Civil and international conflict in the generation of displaced populations.

**PUBH 2116. Global Delivery of Health Systems. 3 Credits.**
Introduction to health systems and the basic concepts of health systems administration and financing and health care reform with examples from advanced, middle income, and poor countries.

**PUBH 2117. Service Learning in Public Health. 3 Credits.**
A service-learning course that combines classroom instruction with practical learning. Students are responsible for securing an approved service site before the beginning of the semester; the instructor is available to assist with this placement. Prerequisites: None.

**PUBH 3130. Health Services Management and Economics. 3 Credits.**
Basics of management theory, finance, and economics as applied to managing in the public health and health services field. Prerequisite: ECON 1011.

**PUBH 3131. Epidemiology: Measuring Health and Disease. 3 Credits.**
Principles of epidemiology applied to disease surveillance, control of infectious and chronic diseases, and health services/health policy. Understanding the basic research designs and their relationship to establishing cause and effect and effectiveness of interventions to prevent and cure disease. Prerequisite: PUBH 1101, STAT 1127.

**PUBH 3132. Health and Environment. 3 Credits.**
Introduction to environmental and occupational health and implications for individual and population health. Issues of clean water, environmental toxins, air pollution, and the environmental impact on infectious diseases.

**PUBH 3133. Global Health & Development. 3 Credits.**
Basic concepts of development theory, international health policy, demographic trends, and health promotion; how the relationships between socioeconomic development and global health can be observed, measured, and used for the management of health programs.

**PUBH 3135W. Health Policy. 3 Credits.**
An introduction to the fundamentals of the health care system in the United States and strategies available to policymakers when addressing problems relating to access, financing, and delivery of health care. Prerequisite: PUBH 1101.

**PUBH 3136. Health Law. 3 Credits.**
Legal concepts related to individual health care and public health systems in the United States. Health care law, public health law, and bioethics.
PUBH 3137. Global Public Health Nutrition. 3 Credits.
Consideration of hunger and other nutrition issues globally, including food insecurity, under/over nutrition, and micronutrient deficiencies. Application of UNICEF malnutrition framework to describe vulnerable groups, critique program strategies, and identify multisectoral strategies to reduce hunger and malnutrition. Prerequisites: Required: PUBH 3133 Global Health and Development Recommended: EXSC 2119 Basic Nutrition.

PUBH 3150. Sustainable Energy & Env Hlth. 3 Credits.
Sustainability issues from the perspective of environmental health. Technical, social, and health implications of specific energy sources. Energy conservation and efficiency in the context of population growth, food and water resources, and maintenance of a healthy environment for future generations.

PUBH 3151. Current Issues in Bioethics. 3 Credits.
Recent advances in science and technology make biomedical ethics a continuing matter of concern for students, health professionals and laypersons alike. This course offers an opportunity to investigate both general and specific ethical questions and ethical decision making from both a personal and organizational perspective, including topics such as the right to health care, research with human subjects, reproductive issues, genetics, professional and student roles and responsibilities, and end-of-life issues. Such investigation requires exposure to the issues and to various attempts to address and resolve them. The course requires participation in group discussions as well as independent critical writing.

PUBH 3190. Topics in Public Health. 1-5 Credits.
Topics announced in the Schedule of Classes. May be repeated for credit provided the topic differs. Various offerings each semester.

PUBH 3199. Topics in Public Health. 1-5 Credits.
Topics vary by semester. See the Schedule of Classes for more details. May be repeated for credit provided the topic differs.

PUBH 4140W. Senior Seminar. 3 Credits.
Limited to public health majors in their senior year. Students develop a public health intervention incorporating various domains of the discipline of public health.

PUBH 4199. Independent Study. 3 Credits.
For departmental majors only. Prerequisite: outline of intended project must be approved prior to registration by instructor and dean’s office.

PUBH 6001. BiologicalConcepts/PublicHlth. 2 Credits.
Provides an overview of current knowledge about biological mechanisms of major diseases causing death and disability in the US and globally; understanding and interpreting the reciprocal relationships of genetic, environmental, and behavioral determinants of health and disease in an ecologic context; analyzing, discussing, and communicating biologic principles of disease from a public health perspective.

PUBH 6002. Biostatistical Applic for PubH. 3 Credits.
Application of biostatistical principles to critical analysis of retrospective studies, prospective studies, and controlled clinical trials, as well as studies in the health services literature. Selection, basic calculations, and interpretation of statistical methods for detection of significant associations and differences.

PUBH 6003. Prin & Practice/Epidemiology. 3 Credits.
General principles, methods, and applications of epidemiology. Outbreak investigations, measures of disease frequency, standardization of disease rates, study design, measures of association, hypothesis testing, bias, effect modification, causal inference, disease screening, and surveillance. Case studies apply these concepts to a variety of infectious, acute, and chronic health conditions affecting the population.

PUBH 6004. Env/Occ Hlth-Sustainable World. 2 Credits.
Examines the connection between population health and exposures to chemical, physical, and biological agents in the environment. Through the use of problem-solving frameworks, students will become familiar with data sources, methodologies and policy approaches being used to address the public health impacts of environmental and occupational health hazards, including the consequences of climate change, natural resource degradation, and industrial chemicals. The course will integrate key concepts of environmental health with principles of sustainability to illustrate how public policies and practices on the local, national and global level affect population health.

PUBH 6006. Mgt & Policy Approaches to PH. 3 Credits.
An introduction to basic principles, concepts and skills related to public health management and policy. This course is divided into three sections focusing on management and policy approaches to public health at three different levels: the system, the organization, and the group/individual level. This course provides an introduction to basic principles, concepts and skills related to public health management and policy. The course is divided into three sections focusing on management and policy approaches to public health at three different levels: the system, the organization, and the group/individual level. The first five weeks focus on the larger, system Issues surrounding the organization, financing, and delivery of health services in the United States along with policy typologies/frameworks and the legal basis for health policy interventions. The next four weeks examine policy and management at the organization level. During this segment, we will explore organization theory and design, organization change, financial management, and crafting a policy analysis for an organizational decision-maker. The final five weeks will be dedicated to the group and individual. Here, we will explore personnel management, teams and team performance, and communication. Throughout the course, the interrelated nature of management and policy will be reinforced.
PUBH 6007. Social&BehaviorAppr-Pub.Hlth. 2 Credits.
Emphasizes social and behavioral science theories, models, and concepts that can be applied to public health problems and interventions. Describes the role of social and community factors, including race/ethnicity and culture, in both the onset and solution of public health problems and describe the inter-relationship between the social/behavioral sciences.

PUBH 6010. Independent Study. 1-6 Credits.
Designed to provide the student with an opportunity to gain or enhance public health knowledge and to explore an area of interest related to public health research or the delivery and/or administration of health services. Permission of instructor/advisor required.

PUBH 6013. Master's Thesis. 3 Credits.
See Advisor.

PUBH 6014. Practicum. 1-3 Credits.
This course provides the opportunity for MPH students to apply the knowledge and skills acquired through their programs of study. A planned, supervised and evaluated practice experience that is relevant to the student’s program is an essential component of a public health professional degree program. These opportunities can take place in a variety of agencies or organizations. Each program customizes Practicum requirements to meet students’ needs. (Credit/No Credit) [For 45-credit MPH students who started Summer 06 or after.]

PUBH 6015. Culminating Experience. 1-3 Credits.
Students synthesize and integrate knowledge acquired in coursework and other learning experiences and apply theory and principles to a situation that approximates some aspect of professional practice. Program faculty evaluate the student’s mastery of the body of knowledge and ability to demonstrate proficiency in the required competencies. Requirements evaluated are adapted to the degree program.

PUBH 6016. Field/Laboratory Experience. 2 Credits.
The overall purpose of the field/laboratory experience requirement is to introduce students in the MS-PHMEID degree program to a supervised practical experience in a Public Health Laboratory or other qualifying public health entity from the perspective of the actual wet laboratory operations. Students that already have this laboratory experience will be introduced to epidemiologic research, particularly surveillance, and its tie-in with laboratories either in the United States or in an international setting.

PUBH 6050. Introduction to Health Services Delivery. 2 Credits.
Introduction to the US health services financing and delivery system with a focus on the major components of the system, the interaction of elements of the system, and the history of the development of today’s system. Addresses the national context and history of health services, population health and health care spending in the US, employment-based health insurance, Medicaid and the uninsured, Medicare, international health care systems, managed care, hospitals and facilities, physicians and health workforce, long-term care and prescription drugs, and health care reform. (Same as HSML 6202).

PUBH 6052. Practical Data Management and Analysis for Public Health. 2 Credits.
Practical aspects of dataset creation, data management, rudimentary statistical analysis, and tabular and graphical presentation of results. Tasks covered include creating codebooks, entering and cleaning data, deriving new variables from existing ones, choosing and implementing appropriate analytical techniques, graphing and tabulating results, and documenting and protecting work.

PUBH 6054. Community Engagement and Advocacy. 2 Credits.
Tools and strategies for public health practitioners to understand, respect, organize, and collaborate with community groups and organizations for promotion of healthy behaviors. Development of practical skills to harness available resources in a community to advocate for healthy living and positive health outcomes.

PUBH 6056. Public Health Leadership Seminar. 1 Credit.
Leadership lessons taken from the careers of a diverse group of executives and entrepreneurs from the corporate, government, nonprofit, and art sectors. Leadership theory and styles. Building networks; skills for effectively engaging with peers, potential employers, and business partners.

PUBH 6090. Practicum/Culminating Exp. 4 Credits.
Individually tailored. Culminating Experience for the MPH program. Advisor approval required prior to registration.

PUBH 6091. Special Project. 1-4 Credits.
Under faculty supervision, the student undertakes an original project that applies the skills and knowledge gained in the chosen track and/or concentration within the MPH program. Prerequisite: Permission of the instructor. NOTE that credits vary by program; please consult your program plan to register for the appropriate number of credits. [For 36-credit MPH students only].

PUBH 6099. Topics in Public Health. 1-3 Credits.
In-depth examination of a particular facet of public health. Topics vary by semester. See the Schedule of Classes for more details. May be repeated for credit provided the topic differs.
PUBH 6121. Environmental and Occupational Epidemiology. 3 Credits.
Epidemiologic methods for the study of environmental and occupational health problems. Epidemiologic exposure assessment methods and methods relevant to cohort, case-control, cross-sectional, and cluster investigation studies. Sources of and evaluation of biases and confounding, as well as survey and questionnaire design. Prerequisites: PubH 6003, 6002.

PUBH 6122. Protecting Public Health and the Environment: Policies, Politics, and Programs. 3 Credits.
The legislative, regulatory, judicial, and political system in the United States developed to protect human health and the environment. National and global public and environmental health agencies, policy development, and current topics. Prerequisites: PUBH 6004 or permission of the instructor.

PUBH 6123. Toxicology: Applications for Public Health Policy. 3 Credits.
Introduction to principles of toxicology with emphasis on concepts most relevant in risk assessment, management, and communication; and public health policy. Prerequisite: college chemistry.

PUBH 6124. Problem Solving in EOH. 3 Credits.
This culminating course uses problem-based learning methods to examine a variety of real-world EOH issues in depth. Cases stimulate students to integrate their cumulative knowledge across all required courses and demonstrate their professional competencies. Students to conduct activities characteristic of EOH practice: evaluating a variety of technical, public, and media, reports; integrating and interpreting environmental, exposure, and health information effectively; designing analytic and communication strategies; presenting in writing and orally relevant materials to address EOH issues; and, making appropriate policy and/or program decisions and recommendations. Prerequisites: PubH 6121, 6123, 6126.

PUBH 6125. Intro-Children’s Health & Env. 2 Credits.
Describes the impact of environmental toxicants on children’s health and reviews some of the major policy issues in the field of children’s environmental health. Prerequisites: PubH 6004.

PUBH 6126. Assessment&Control/Env Hazards. 3 Credits.
Introduces the anticipation, recognition, assessment, and control of hazards in the workplace and the ambient environment. It emphasizes an understanding of the characteristic features of specific hazards, which may be chemical, biological, or physical/ergonomic.

PUBH 6127. Germs: An Introduction to Environmental Health Microbiology. 2 Credits.
Basics of public health microbiology as it relates to the environment, food, water, and bioterrorism. Examines from an environmental health perspective how the principles of microbiology are applied to current and emerging public health issues, whether from intentional or unintentional contamination of the environment. Specific topics will include: industrial animal production and increasing prevalence of antibiotic resistance; effectiveness of various point of use technologies for water purification; recent advances in quantitative microbial risk assessment; one medicine (where public and veterinary health meet); detection strategies for microorganisms (including bioterrorism agents); and current approaches in food defense and agroterrorism. Prerequisites: PUBH 6004.

PUBH 6128. Global Envrnmntl & Occptnl Hlth. 2 Credits.
Examines environmental and occupational health issues at various stages in the development process. Emphasis will be placed on principles of development economics and associated environmental health issues. Prerequisites: PubH 6004.

PUBH 6130. Sustainable Energy & Environmnt. 2 Credits.
Public Health professions play a vital role in shaping sustainable energy strategies in the context of environment & human health impacts. Sustainability of various energy strategies including energy conservation, green building principles and renewable energy. Mitigation & adaption policies for climate change. Emphasizes the life cycle framework which focuses on natural resource depletion, water & energy consumption as well as air, water & solid waste pollutant emissions. Prerequisite: PubH 6004.

PUBH 6131. Applied Data Analysis in EOH. 3 Credits.
Apply biostatistical concepts & methods to analysis of EOH data. Students manage datasets, conduct data analyses using Stata, present data graphically, & interpret data for relevance to EOH research, policy & practice. Skills developed and practiced will help students synthesize data, consider findings in terms of risk management options, and communicate findings for intended audiences. Prerequisites: PubH 6002, 6003, & 6004.

Course designed for students working in both disaster and development settings of developing countries where contaminated water, inadequate sanitation and poor hygiene (WASH) are the cause of serious health problems. Fundamental concepts will be taken from classroom to the field for first hand experience applying WASH methods. Prerequisite: PubH 6004.

PUBH 6133. Social Dimen Clim Chnge & Hlth. 2 Credits.
Explore the drivers of climate change and outcomes with particular focus on health dimensions. Will address drivers, obstacles, vulnerabilities, inequality and adaptation as well as technical and social solutions.
PUBH 6134. Communication Science for PubH. 2 Credits.
Learn how to evaluate primary scientific literature & communicate research findings in outlets ranging from peer-reviewed journals to tweets. Identify target audiences & shape the message to maximize impact while staying true to supporting evidence. Prerequisites: PubH 6002, PubH 6003Science-based research is the foundation to successful public health interventions, but research findings must be effectively communicated to the public health community, policymakers, and the general public before they can affect practice. In this course, students will learn how to evaluate the primary scientific literature and communicate research findings in outlets ranging from peer-reviewed journals to 140 character Tweets. Students will learn to identify their target audience and shape their message to maximize impact, while staying true to the supporting evidence. Written and oral communication as well as critical evaluation will be emphasized throughout this course.

PUBH 6199. Topics in EOH. 1-3 Credits.
In-depth examination of a particular facet of public health. Topics and prerequisites vary.

PUBH 6236. Systematic Review of Public Health Literature. 1 Credit.
The process of conducting systematic reviews of literature in order to translate research into public health practice recommendations. Recommended for M.P.H. candidates planning to conduct a systematic review of the literature for their culminating experience. Prerequisites: PubH 6002 or EXNS 6204; PubH 6003 or EXNS 6205.

PUBH 6237. Chronic Disease Epidemiology. 2 Credits.
An overview of the descriptive, analytic, and etiologic epidemiology of chronic diseases, with an emphasis on cardiovascular disease, cancer, and diabetes. The role of modifiable risk factors for chronic diseases such as obesity, diet, physical activity, smoking, and environmental exposures in relation to chronic disease prevention and control. Epidemiologic methods and study design and public health approaches to disease control, including surveillance, screening, and interventions. Past or concurrent enrollment in PUBH 6001 or EXSC 6202 and PUBH 6203 and PUBH 6247 or EXSC 6204 is strongly recommended. Prerequisites: PUBH 6002 or EXNS 6204 and PUBH 6003 or EXNS 6205.

PUBH 6238. Molecular Epidemiology. 1 Credit.

PUBH 6239. Epidemiology of Foodborne and Waterborne Diseases. 1 Credit.
Foodborne and waterborne toxicants; diseases linked to eating and drinking and their prevention. Topics include transmission of disease and disease processes; microbial toxins, mycotoxins, chemical toxins, bacterial infections (e.g., salmonellosis, shigellosis, vibrio, listeria), virus and parasitic infections; issues in food and water safety. Prerequisites: PubH 6003.

PUBH 6240. Pediatric HIV/AIDS. 1 Credit.

PUBH 6241. Nutritional Epidemiology. 2 Credits.
Methodological issues related to dietary assessment, nutrition surveillance, and the epidemiology of obesity. Current trends, including the health impacts of vitamin D and sodium. Interpretation of the scientific literature in the field. Examples drawn from the National Health and Nutrition Examination Survey. Prerequisites: PubH 6003.

PUBH 6242. ClinicalEpid&DecisionAnalysis. 2,3 Credits.
Quantitative and qualitative approaches to decision making, including risk- benefit analysis, decision analysis, and cost-effective analysis. Applications to technology assessment; development of clinical guidelines. Note: MPH Health Policy, MS Health Policy and Doctoral Students concurrently take PubH 6299 topics course by the same name for 1 credit, thereby enrolling for three total credits (PubH 6242=2 credits plus PubH 6299.xx, same name =1 credit). Prerequisites: PUBH 6002, PUBH 6003.

PUBH 6243. Topics: ClinicalEpid&DecAnalysis. 1 Credit.
This class takes an evidence-based problem solving approach for Masters level students interested in the health policy focus of clinical epidemiology utilizing methods taught in PubH 6242. Prereq: PubH 6003. Corequis: PubH 6242.

PUBH 6244. Cancer Epidemiology. 2 Credits.
Epidemiology of specific cancers, with an emphasis on molecular and genetic epidemiology. Current research in the field. Prerequisites: PubH 203.

PUBH 6245. InfectiousDisease Epidemiology. 2 Credits.
The role and conduct of laboratory and field investigations in the epidemiology of infectious diseases. Prerequisite: PubH 6003.
PUBH 6247. Design of Health Studies. 3 Credits.
Epidemiologic concepts and methods applied to specific research questions especially new types of public health problems. Recognition and development of the most appropriate study design for a specific health issue. Ecologic, cross-sectional, case-control, cohort studies and clinical trials. Sampling, measurement, questionnaire design, causality and causal criteria. Development of a research proposal. Co-requisite: PUBH 6002. Prerequisite: PUBH 6003.

PUBH 6249. StatPackages/DataMgt&DataAnlys. 3 Credits.
This course familiarizes the student with one of the most widely used database management systems and statistical analysis software packages, the SAS System, operating in a Windows environment. Throughout the course, several database management system techniques and data analytical strategies for the appropriate analysis of datasets obtained from a variety of studies will be presented. Statistical techniques covered include linear regression, analysis of variance, logistic regression, and survival analysis. Prerequisite: PUBH 6002.

PUBH 6250. Epidemiology of HIV/AIDS. 2 Credits.
Methodological issues central to HIV/AIDS research. Biases peculiar to HIV/AIDS epidemiologic studies (both observational and experimental designs). The natural history of HIV, diagnosis, surveillance, vulnerable subpopulations, behavioral facets, and evaluation of epidemiologic studies with an emphasis on methodological considerations. Prerequisite: PUBH 6003, Recommended PUBH 6002.

PUBH 6252. Advanced Epidemiology Methods. 3 Credits.
Advanced quantitative epidemiologic methods, with a focus on basic data analytic techniques, identifying and evaluating bias and adjusting for confounding. Dose-response, trend analysis, and multiple linear and logistic regression models. Prerequisites: PUBH 6002, 6003, 6247. Co- or prerequisite PUBH 6249.

PUBH 6253. Issues in HIV Care & Treatment. 1 Credit.
This course will provide an overview and in depth consideration of some of the major issues in treatment of HIV disease, including the assessment of efficacy and effectiveness, drug resistance, monitoring of drug toxicity, special populations, the interrelationship between treatment and prevention, and quality of care. The course has been designed with an interdisciplinary audience in mind. In discussions and assignments, students will be able to emphasize their own area of interest and/or expertise (e.g. epidemiology, policy, etc).

PUBH 6255. Org Responses to HIV/Epidemic. 2 Credits.
This seminar focuses on the rapidly evolving responses of local, national and global governmental and non-governmental organizations to the HIV/AIDS epidemic. Inspirational leaders of selected HIV/AIDS organizations are invited to describe how their organizations contribute to fighting the epidemic; the leadership and management skills that they use in their daily work; and their strategic decision-making processes. Basic principles of epidemiology, leadership and organizational strategy and structure are addressed through didactic presentations and interactive faculty-student dialogue. Lessons learned through the lens of HIV/AIDS organizations are broadly applicable to other public health problems. Students will learn about the strengths and challenges of different types of public health organizations as they make career decisions about their own transition to the public health work force. Prerequisite: PUBH 6003, HIV/AIDS experience, or permission of Instructor.

PUBH 6258. Adv Topics/Biostat Consulting. 1 Credit.
Principles and practice of biostatistical consulting in public health and medical research environments.

PUBH 6259. Epid Surveillance/PublicHealth. 2 Credits.
Focus on foundations of public health surveillance systems for communicable as well as chronic diseases. Outbreak investigation methods will be included, as well as surveillance data sources, data management, data analysis, ethical issues, surveillance system evaluation, and use of information for prevention. Surveillance systems for reportable diseases, nosocomial infections, bioterrorism events, cancer, environmental disease, vaccine-related adverse events, bovine spongiform encephalopathy, and military personnel will be discussed. Prerequisites: PUBH 6003.

PUBH 6260. Adv DataAnalysis-Public Health. 3 Credits.
Advanced data analysis using the SAS System to expand on the analytic techniques gained in PUBH 6002 and PUBH 6249 and to provide students with the applied statistical skills required to analyze various types of public health datasets. Prerequisites: PUBH 6002, 6249.

PUBH 6261. Epi-Bio Skills Bldg Seminar. 1 Credit.
Assists students in developing the skills needed to complete degree requirements and to provide them with practical applied public health training. By the end of the course, students will be able to describe essential skills needed for preparation, implementation, presentation and communication of public health data.

PUBH 6262. Intro-Geog Information Systems. 1 Credit.
Geographic information systems (GIS) for mapping and display of health data. The course makes use of ArcGIS 8.3. The use of spatial statistics for the detection of clusters and patterns in the spread of diseases. Working with geodatabases, shape files, layers, query information from attribute tables, geocode addresses and customizing GIS applications.
PUBH 6263. Advanced GIS. 1 Credit.
Provides mid to advanced level training in GIS for display and analysis of health data. Use software ArcGIS 9.3 and additional extensions such as Spatial Analyst and Geostatistical Analyst. Also uses GeoDa software. Emphasizes benefits of using GIS to do more than simply manage and map data. GIS supports a range of spatial analysis functions that enable researchers to extract additional meaning from manipulating geographic data. Learn to work with raster datasets and geodatabases to build spatial models for analyzing health data and evaluating spatial patterns of health events based on notion of distance. Prerequisite: PUBH 6262.

PUBH 6264. Quantitative Methods. 3 Credits.
Introduces basic concepts in mathematical statistics. Topics will include probabilities (unconditional and conditional), density and distribution functions of continuous and discrete random variables, including expected values. Specific distribution functions discussed will be Binomial, Poisson, Hypergeometric, and Gaussian distributions. Additional topics include bivariable distributions, variance-covariance matrix, limiting theory, asymptotic results, and maximum likelihood estimation. Prerequisites: Math 1231, 1232 and PUBH 6002, 6249.

PUBH 6265. Design of Medical Studies. 3 Credits.
Design of medical investigations, including the randomized clinical trial, observational cohort study, and the retrospective case-control study. Specific methods regarding sample size, power and precision and statistical procedures for randomization and sa.

PUBH 6266. Biostatistical Methods. 3 Credits.

PUBH 6267. Time Series: Applications in PH. 2 Credits.
Introduce basic concepts for the identification and modeling of time series in the time domain approach. Learn a new set of terminology standards and a different way to analyze these type of data and to forecast future values of a time series and its accuracy. Software used is SAS/ETS and 3 procedures: ARIMA, AUTOREG, FORECAST. New mathematical notation will be used. Prerequisite: PUBH 6249.

PUBH 6268. Advanced SAS. 1 Credit.
Intensive in advanced programming using SAS. Expand technical skills to provide advanced SAS tools for data management and graphics. Topics to include Interactive Matrix Language (IML), SAS Macro facility language, and drill-down graphs using SAS/GRAPH. Prerequisites: PUBH 6002, 6249 or Instructor’s permission.

PUBH 6269. Reproductive Epidemiology. 1 Credit.
Current research, controversial issues and methodological problems in epidemiology of reproductive and perinatal health. Present reproductive health issues such as conception and infertility; perinatal issues such as complications of pregnancy, infections in pregnancy, adverse pregnancy outcomes, and birth defects. Prerequisite: PUBH 6003.

PUBH 6270. HIV/AIDS Surveillance. 1 Credit.
Overview of surveillance methods used domestically and internationally to monitor HIV/AIDS epidemic. Surveillance systems including sentinel, population based, behavioral, and incidence surveillance will be presented and discussed. Strengths and weaknesses of these various systems will be discussed in addition to how data from these systems impact and inform HIV/AIDS related policies and programs. Prerequisite: PUBH 6003.

PUBH 6271. Disaster Epidemiology. 1 Credit.
Introduction to disaster epidemiology that elucidates the important role epidemiologists play in assessing the health and psychological effects of natural and man-made disasters and in identifying factors that contribute to these effects. Focus will be on applications of epidemiologic methods to the study of public health consequences of disasters, case studies from actual disasters used to illustrate various roles of epidemiologist in responding to these events and lessons learned. Highlight key skills that epidemiologists need to be part of a response and recovery . Identify methodological issues for future work. Prerequisites: PUBH 6002, 6003.

PUBH 6272. Infectious Agents- Cancer. 1 Credit.
Describes the role of infectious agents in the etiology of human cancer. Emphasis on differences between specific oncogenic viruses. Other oncogenic agents, bacterial and parasitic, will also be discussed. Discuss laboratory approaches to the documentation of their pathogenicity, how behavior affects mode of transmission, and which types of data provide strongest support for documenting oncogenic potential for humans. Prerequisite: PUBH 6003.

PUBH 6273. Ethnographic Methods. 1 Credit.
Use ethnographic field methods in conjunction with epidemiological research. Introduction to specific methods used to examine health phenomena and determinants of disease. Learn specific applied skills that can be modified with socio-cultural modifications to evaluate urban sites and other settings. Basic skills in application of ethnographic methods, including recursive observations, participant observations, and variety of approaches to interviewing such as in-depth, structured and non-structured as well as conversational interviewing. Discuss use of multiple approaches in conjunction with ethnography, including focus groups, archival, document, statistical and secondary data analysis, and survey research methods. Course emphasizes use of ethnographic research methods in community-based health settings and evaluates issues in cultural competency and how to garner stakeholder support to conduct epidemiologic studies. Prerequisite: PUBH 6003.
PUBH 6274. Emerging ID for PH Pro's. 2 Credits.
Focus on epidemiology of emerging infectious diseases of public health importance, including factors leading to their development, management of emerging infectious diseases from a public health and laboratory standpoint, including biosafety, and strategies for emergency preparedness from a national and international perspective. Course emphasizes the context of emerging infectious diseases and strategic approaches to their containment. Prerequisites: PubH 6003 or Micr 6292 or Instructor permission.

PUBH 6275. Essential PH Lab Skills. 2 Credits.
This course will provide public health students with practical laboratory experience Prereq: Micr 6239 or Micr 6212 or permission of instructor.

PUBH 6276. Health Microbiology. 3 Credits.
Gain in-depth understanding of important non-viral pathogens pertinent to PH Microbiology. Learn how to isolate & identify pathogens using critical thinking & problem solving skills.

PUBH 6277. Public Health Genomics. 2 Credits.
Learn about molecular technology and how it is impacting public health practice & discourse in the post genomic era. Explore ways in which genomics is being used to solve or help alleviate PH problems through case-focused discussions. Prerequisite: genetics or molecular biology within 6 years or permission of course instructor.

PUBH 6278. Public Health Virology. 3 Credits.
In-depth understanding of viral pathogenesis by focusing on current research, controversial issues and PH relevance. Survey of family of viruses most relevant to today's public health efforts, concentrating on virus-host interactions & therapeutic strategies.

PUBH 6280. MEID Final Project. 2 Credits.
Focus on the synthesis and summarization of data acquired through epidemiologic and/or public health laboratory research. Prerequisites: PubH 6002, 6003, 6292, 6245; Biosafety training, CITI training, HiPAA training, permission of instructor.

PUBH 6281. Analysis of Complex Surveys Using SAS and Stata. 1 Credit.
An applied data analysis course focusing on procedures commonly used to analyze data from complex surveys such as the National Health and Nutrition Examination Survey. Review of various types of sampling, sample design focusing on core components of complex surveys, and the statistical justification and procedures for including design effects in analytic models. Application of these concepts to real data using SAS and Stata. Prerequisites: PubH 6003 and PubH 6249 or equivalent Stata course.

PUBH 6282. Introduction to R Programming. 1 Credit.
R is an open source software environment for statistical computing and graphics. Data transfer between SAS and R, data manipulation and visualization within R, programming and debugging, R libraries, and graphics theory. Prerequisites: PubH 6249. Recommended background: Programming experience in a statistical package such as Stata or in high level language such as C, Python, Perl.

PUBH 6283. Biostatistics Consulting Practicum. 1 Credit.
Supervised experience involving the synthesis of biostatistical skills with client consultation. Students consolidate their skills through an experience-based understanding of how biostatistical skills are utilized in one or more domains of health research. Prerequisites: STAT 6201 and PUBH 6003. Recommended background: PUBH 6249 or PUBH 6210.

PUBH 6299. Topics in Epi/Bio. 1-3 Credits.
In-depth examination of a particular facet of public health. Topics and prerequisites vary.

PUBH 6305. Fundamentals for Health Policy. 2 Credits.
Provides an overview of public health and health care in the United States as an introduction to the study and analysis of health policy. It covers the governmental framework, institutions, financing streams, workforce, constituencies, and interest groups engaged in the health sector to ensure that students begin their analytic policy training with grounding in the political, economic, and social realities of public health and health care.

PUBH 6310. Statistical Analysis in Health Policy. 3 Credits.
Quantitative and statistical methods of data analysis for health policy and health services research. Instruction in conducting data analyses using Stata statistical and data analysis software and application of acquired skills to health policy and health services research. Practical experience in programming and analysis of various health policy-related questions. Entering and importing data; creating, saving, and merging data sets; creating and modifying variables; labeling variables and values; and conducting analysis ranging from univariate to multivariate analyses, including multiple regression and logistic regression. The use of existing data sets to analyze health policy issues and interpret these analyses for policy purposes. Prerequisites: PUBH 6002.

PUBH 6315. Intro-Health Policy Analysis. 2 Credits.
Core elements of health policy analysis: problem definition, background, the political, economic, and social landscape; development of policy options and recommendations. Written, graphic, and oral presentation skills associated with policy analysis. Prerequisites: PUBH 6305.
PUBH 6320. Advanced Health Pol Analysis. 2 Credits.
Provides instruction in critical elements of health policy applications: problem definition; political, social, and economic assessment of a problem; program evaluation and data analysis; development of policy options; and the written and oral presentation of findings and recommendations. Hands-on application of basic quantitative tools in health policy. Prerequisite: PubH 6315.

PUBH 6325. Fed Policymaking & Pol Advocacy. 2 Credits.
Provides students with an understanding of the federal health policymaking process, including an overview of the legislative, administrative, and judicial processes that impact federal health policymaking. Reviews the federal budget process and outlines the authorization and appropriation processes. Finally, the course uses an advocacy campaign framework to demonstrate common techniques and strategies used to advance legislative and regulatory policies including coalition building, the use of policy studies and media relations, among others. Prerequisite: PubH 6305.

PUBH 6330. Health Services and Law. 3 Credits.
This course addresses the relationship of law and the legal system in the U.S. to the individual health care delivery system. It examines how various sources of law affect the organization, delivery, and financing of health care, as well as the regulation of health care quality and patient rights.

PUBH 6335. Public Health and Law. 3 Credits.
Examines how law can both promote and impede the public's health. Introduces students to the legal concepts that underlie the public health system and that inform public health policymaking in the United States. Topics to be covered include the role of law in public health care and policy (e.g., governmental powers vs. civil liberties, regulation of public health, tobacco regulation), managed care and public health, the role of public health officials in shaping law and policy, and public health law reform.

PUBH 6340. Health Economics and Finance. 3 Credits.
Covers economic principles as they apply to health services financing and public health policy: provider payment policy and cost containment, supply of health providers and services, individual demand for health care services, and cost-benefit analyses and economic incentives to promote public health goals. Prerequisite: Basic Economics or instructor's permission.

PUBH 6345. Health Policy Research Design. 2 Credits.

PUBH 6352. Basics of Econ for Health Pol. 1 Credit.
An introduction to modern microeconomics- the study of how consumers, firms, industries, and the public sector make decisions and allocate their resources in the economy. The principles of supply and demand and elasticity in both the private and public sectors will be analyzed.

PUBH 6353. Child Health Advocacy. 1 Credit.
Introduction to child health advocacy. Affordable Care Act (ACA), preventive care, school health, environmental issues, and emergency care. The use of data for advocacy.

PUBH 6354. Mental Health/Subst Abuse Pol. 2 Credits.
Provides an overview of the U.S. mental health and substance abuse delivery system, its components, and the policy challenges created by the organization of this system. Considers the behavioral health care system from the perspective of several main “actors” in the system: patients, providers (primarily doctors & hospitals), health plans, and payers (public & private). Prerequisite: PubH 6305.

PUBH 6355. Comparative Health Policy. 1 Credit.
Introduction to international health systems and world health policy innovations and potential relevance to the United States. The origins and comparative performance of a range of international healthcare systems and comparative responses to specific health policy challenges. Methodological challenges of international comparisons and theoretical implications. Students design and conduct comparative analysis in the form of a short policy research proposal. Prerequisites: PubH 6305.

PUBH 6356. State Health Policy. 2 Credits.
Provides practical understanding of state health policy and programs by placing the student in the position of developing a briefing on health and health care for a new governor. This is a hands-on class designed to replicate the experience of a newly appointed official “learning the ropes” in a particular state. Prerequisite: PubH 6305.

Health care cost containment in the context of the current implementation of national health reform. Cost containment strategies; economic underpinnings, anticipated impacts, perspectives of and implications for health care providers and systems, and political considerations. Prerequisites: PubH 6340.

PUBH 6358. Vaccine Policy. 2 Credits.
Examines vaccine development, production, distribution, and delivery in the U.S. from the perspective of the influenza vaccine shortage. Highlights the interactions among the business, legal, political, public health, medical, federal/state/local government, and consumer communities that combine to influence immunization policy. Prerequisite: PubH 6305.

PUBH 6359. Reproductive Health Policy. 1 Credit.
Overview of reproductive health policy at the federal and state levels. Balancing the interests of competing stakeholders; the fundamental underlying role of significant disparities in financing for and access to reproductive health services; and how policymaking can alleviate or exacerbate preexisting issues.

PUBH 6360. AdvMaternal&ChildHealthPolicy. 1 Credit.
In-depth exploration of maternal and child health policy in the U.S., with a particular emphasis on the role of personal and public health services for women, children, youth and their families in the context of health and human services system change. Prerequisite: PubH 6561.
PUBH 6361. Health Workforce Policy. 2 Credits.
PUBH 6364. Fed Budget Process/Health Care. 1 Credit.
Focuses on how the Congressional budget process shapes the 
funding and design of federal health care programs, ranging 
from entitlement programs like Medicare to appropriated 
programs like community health centers. Discussions will 
cover budget resolutions, appropriations bills, and budget 
reconciliation legislation, as well as Congressional procedures & committees through which they are considered. Prerequisite: PubH 6305.
PUBH 6365. Advanced Global Health Security & 
Diplomacy. 2 Credits.
The development of foreign policy at the nexus of global 
health and national security; the evolving concept of global 
health diplomacy. Science and technology policy, biodefense 
and counter terrorism, weapons of mass destruction 
nonproliferation, food security, global health challenges, and 
U.S. diplomacy. Role of government and non-governmental 
organizations.
PUBH 6366. Hlth Care Corporate Compliance. 2 Credits.
Addresses the federal laws and regulations that affect U.S. 
health care industry participants, particularly those relating to 
the prevention of fraud and abuse, and the role of corporate 
compliance programs. Prerequisite: PubH 6330 or HSML 6215.
PUBH 6368. Law, Medicine, and Ethics. 2 Credits.
Designed to address those issues in law, ethics, and policy that 
focus on the scope and limits of individual autonomy within 
the health system. The specific foci are: reproductive health; 
human sexual relations; the refusal of potentially lifesaving 
medical treatment; assisted suicide; and research involving 
human subjects. Prerequisite: PubH 6330.
PUBH 6370. Medicare/Medicaid Law & Policy. 2 Credits.
Describes current legal and public policy issues in the Medicare 
and Medicaid programs, including the legal, operational, 
financial, and organizational rules for the two programs. 
Prerequisite: PubH 6315.
PUBH 6372. Minority Health Policy. 2 Credits.
Introduces students to the concept of health disparities and the 
implications of disparities for health care practice and policy. 
Students will learn how disparities are defined and measured, 
as well as emerging approaches in practice and policy to 
reducing disparities. Prerequisite: 6315.
PUBH 6374. Pharmaceutical Policy. 2 Credits.
Examines legal and regulatory frameworks related to the 
demand for and supply / quality of pharmaceutical products. 
Highlights policies specific to drug development, pricing, 
reimbursement, utilization, dissemination of information, and 
post-marketing surveillance. Prerequisite: PubH 6315.
PUBH 6376. Primary Health Care Policy. 2 Credits.
Explores the politics and policy of the provision of primary 
health care in the U.S. Covers the rise of the field of primary 
care and how it is supported and financed, and the role of 
insurers and government in regulation and oversight in the 
areas of access, cost, and quality. Prerequisite: PubH 6315.
PUBH 6378. HIV Policy in the U.S.. 2 Credits.
Examines various aspects of the policy response to HIV. The 
focus will be on how U.S. policy is shaped in terms of both 
domestic and global responses to the pandemic, i.e., who are 
the players and what are the processes for making U.S. policy. 
The course will also study specific timely policy questions 
facing policy makers at the time the course is offered.
PUBH 6380. Bridging Health Policy and Health Information 
Technology. 2 Credits.
Basics of health care informatics policy and core technological 
components for health services managers, public health 
professionals, health policy analysts, and health information 
technology staff. Policy and legal frameworks, governance and 
financial issues, technological infrastructure, and business and 
technological operations. Concepts and roles of information 
and how information technology can support the healthcare 
industry in promoting quality improvement.
PUBH 6382. Community Health Center Policy. 2 Credits.
PUBH 6384. Health Care Quality and Health Policy. 2 
Credits.
The role of quality in the U.S. health care delivery system from 
the perspective of multiple stakeholders, including public and 
private payers, providers, consumers, and employers. Defining 
and measuring quality; how quality information is used; and 
policy implications of quality improvement. Recent changes 
under health reform legislation. Prerequisites: PUBH 6305.
PUBH 6386. Public Health Preparedness Policy. 2 Credits.
Issues in public health emergency preparedness and 
response at the nexus of homeland and national security. The 
relationship between public health and criminal investigation, 
forensic epidemiology, and surveillance; biodefense; and the 
role of the scientific community. Infrastructure, threat themes, 
and associated preparedness and response policy.
PUBH 6399. Topics in Health Policy. 1-3 Credits. 
In-depth examination of a particular facet of public health 
policy. Topics and prerequisites vary.
PUBH 6400. Global Health Frameworks. 3 Credits.
Provides a foundation of the various frameworks and 
techniques used to study global health. The frameworks 
examined will include epidemiology, anthropology, economics, 
human rights, and ethics among others. The perspectives 
studied will provide an introduction and understanding of how 
global health issues are framed, structured and presented.
PUBH 6401. Comp Regional Determinants. 2 Credits. 
Examines the set of social, cultural and economic issues most 
central to shaping health in each of the world’s main regions. 
Overseas Learning Collaboration program in Bangladesh. 
Prerequisite: PubH 6400. Fee varies by year.
PUBH 6402. Washington Seminar. 2 Credits.
This seminar course will provide an overview of global health policy and practice institutional resources in Washington DC. Students gain an understanding of how global health issues are framed, presented and biased in a multi-institutional setting. This is a collaborative learning exercise where simple web based tools will be used to develop a virtual classroom of the current global health policy and practice dialogue among Washington DC based governmental, multilateral, NGO, private sector and policy institutes.

PUBH 6403. Scientific Basis GH Intervntn. 2 Credits.
Introduces the scientific basis of global health interventions and how they address proximal and underlying determinants of health. Successful students will obtain a strong technical grounding in the determinants, biology and pathogenesis of specific diseases, for which affordable tools for prevention, control, and case management exist and are in use in public health practice.

PUBH 6410. Global Health Study Design. 2 Credits.
A foundation in the tools necessary for planning and designing research related to identifying and solving problems in global health: choosing an appropriate research topic and research question, understanding the relationships between hypotheses and study objectives, conducting a literature review, choosing a research design to achieve the project purpose, writing a research proposal including planning for the challenges of global health research, and achieving productive dissemination of findings.

PUBH 6411. Global Health Qualitative Research Methods. 2 Credits.
An introduction to qualitative data collection and analysis in global health settings. Methodologies include survey design, interviews, focus groups, and participant observation. Archival research and clinical trial research are also addressed. The set of methods most commonly used to collect qualitative data in global health settings. Students are enabled to prepare interview guides, conduct in-depth interviews, and analyze and document the results from a qualitative field project. Prerequisites: PUBH 6002 and PUBH 6410.

PUBH 6412. Global Health Quantitative Research Methods. 2 Credits.
Continuation of the series of global health methods courses. Examination of the fundamental concepts of empirical analysis and qualitative analysis, including open and axial coding, the basis of “grounded theory,” and regression analysis. Prerequisites: PUBH 6002 and PUBH 6410.

PUBH 6416. Ethical and Cultural Issues in Global Health Research and Programs. 1 Credit.
Examine procedures and concerns for protecting communities and human subjects involved in public health programs and research. Consider cultural considerations integral to ethical conduct of public health research and programming in the global context. Discuss history behind rules and regulations that govern ethical principles around conduct of research involving human subjects. Consider contribution that awareness of cultural contexts where we work makes to ethical nature of our work as global health professionals.

PUBH 6430. Theories for Global Health Communication Interventions. 2 Credits.
Use of communication theory and methods in health promotion. Integration of multidisciplinary approaches to public health communication. Prerequisite: PUBH 6007, PUBH 6400.

PUBH 6431. Global Health Communication Strategies and Skills. 3 Credits.
Students conduct qualitative research to evaluate health communication programs, assess readability level and suitability of written health education materials, conduct content analyses, and review/critique current health communication literature. Prerequisites: PUBH 6430-Theories and Applications in Global Health Promotion (unless waived by professor) PUBH 6007- Social and Behavioral Approaches to Public Health.

PUBH 6435. Global Health Program Development and Implementation. 2 Credits.
Basic concepts and principles of program development and implementation including data collection methods, decision making, and problem-solving techniques. Application of program development techniques to specific interventions. Prerequisites: PUBH 6400.

PUBH 6436. Global Health Program Mgmt. 2 Credits.
Management concepts and techniques related to the implementation of health and development programs and projects. Theories of management: planning, monitoring, and budgeting; the role of the manager; management of human and other resources, communication and leadership; motivation, quality control, teamwork, organizational culture and ethics. Prerequisite: PubH 6400, and if DME concentration PubH 6435.
PUBH 6437. Case Study Methods for Global Health Evaluation. 2 Credits.
The specifics of case study research and evaluation methods and application of these methods to the evaluation of global health interventions and programs. The particular challenges of case study design, data collection, and data analysis, with critical assessment of the quality of case studies used in global health evaluations. Appropriate designs and methods for case study evaluation to maximize generalizability and produce findings that engage policymakers and donors. Refinement of skills in analyzing quantitative and qualitative data from a program evaluation perspective, and development of skills in interpreting, disseminating, and using the results from program evaluations. Prerequisites: PubH 6411, PubH 6412, PubH 6501.

PUBH 6440. GH Econ & Finance. 2 Credits.
Fundamentals of macro- and microeconomics and financial analysis in international health including degree of centralization, public-private sector roles, and roles of international donor agencies. Prerequisite: PubH 6400.

PUBH 6441. Intnat’l Health Organizations. 2 Credits.
Provides an in-depth study of the historical development, structure and function of the institutions and initiatives constituting the international health system. Prerequisite: PubH 6400.

PUBH 6442. Comparative Global Health Systems. 2 Credits.
Examine national health systems, how they differ, and how they are performing. Health systems analyzed through four different lenses: health care organizations, health workforce development, health care financing, and health policy development. Compare health systems and health reforms in seven regions of the world and how health system performance might be improved. Course fee may apply. Prerequisite: PUBH 6400.

PUBH 6443. Global Health Agreements and Conventions. 2 Credits.
Explores the impact of regulations, trade and human rights on health by examining the relevant international declarations, agreements and conventions. This course will examine a variety of topics including the impact of international trade agreements on health, the International Health Regulations and other regulations affecting global health, and the relationship between health and human rights. Prerequisite: PUBH 6400.

PUBH 6481. Global Mental Health. 2 Credits.
Focus on global mental health knowledge and public health policy implementation skills regarding the integration of mental health, public health, and primary care in diverse health systems and challenging cultural contexts. Prerequisite: PubH 6400.

PUBH 6482. Int’l Food and Nutrition. 2 Credits.
Examines the major food and nutrition problems internationally, and the policies and programs aimed at addressing food insecurity, under- and over- nutrition, and micronutrient deficiencies. Through a combination of lectures (some delivered by invited experts), discussion sessions, seminal literature, and policy/program critique, the course strives to provide the background knowledge, state of the art strategies, and analytical tools necessary for future work in international nutrition. Prerequisite: PubH 6400.

PUBH 6484. Prev&Cont of VectorBorne Dis.. 2 Credits.
Vector borne diseases involve a vector (carrier) that transmits a pathogen to a human host. This course introduces students to insects and other vectors that are responsible for transmission of diseases such as West Nile Virus, malaria, dengue fever, and elephantiasis. Students will learn how to recognize various disease vectors, how they transmit diseases, the diseases transmitted and methods for effective management and control.

PUBH 6485. Prev&Cont of Water&Sanit. Dis.. 1 Credit.
This course will focus on problems associated with providing adequate water and sanitation in developing countries and diseases like schistosomiasis, cholera, dysentery & typhoid. Innovative tools and solutions for improving water supply and sanitation in developing countries will also be discussed.

PUBH 6486. Global Health Programs and Approaches to the Control of Infectious Diseases. 2 Credits.
Review strategies used for the control of infectious diseases with a focus on the situation in low and middle income countries. Review and critique the goals, strategies and challenges of major global health intervention programs designed to prevent and control infectious diseases. Course includes a historical perspective of achievements to date and the importance of surveillance systems as a core component of effective programs. Intervention strategies addressed include vaccination programs and methods for analysis of effectiveness; the use of chemotherapy as prevention and treatment tools on a population basis; the role of nutritional supplementation; environmental approaches to infectious disease control; and combined/integrated approaches that involve multiple interventions and potential benefits. Prerequisites: PubH 6400 - Global Health Frameworks PubH 6002- Biostatistical Applications for Public Health PubH 6003- Principles and Practice of Epidemiology.
PUBH 6487. Emerging Zoonotic Diseases & Global Food Production. 1 Credit.
Analysis of trends in emerging zoonotic diseases and their links to global food production. Case studies on the use of surveillance systems and outbreak detection techniques to monitor emerging zoonotic diseases. Development of skills to analyze surveillance systems, policy reports, and literature related to emerging zoonotic diseases and food-borne outbreaks within a global context. Prerequisites: PUBH 6003.

PUBH 6491. Public Health Leadership Seminar. 1 Credit.
Leadership lessons derived from the careers of a diverse group of successful executives and entrepreneurs from multiple sectors, including corporate, government, non-profit, and the arts. Development of skills for effective engagement with peers, personal network, potential employers, and business partners. Restricted to students who have faculty permission to register for course.

PUBH 6499. Topics in Global Health. 1-3 Credits.
Reviews current directions of global health advocacy in donor and implementing countries and challenges participants to create effective advocacy strategies for the future. Students will learn about state-of-the-art advocacy tactics including policy analysis, agenda setting, public mobilization/direct action, grassroots and grasstips tactics, advocacy partnerships, media and communications, celebrity activism, and advocacy impact planning. Students will complete a group paper that will impart them with the skills and experience necessary to incorporate advocacy and activism into their professional public health practice. Prerequisite: PubH 6400. Spring. In-depth examination of a particular facet of global health. Topics and prerequisites vary.

PUBH 6500. Planning and Implementing Health Promotion Programs. 3 Credits.
Students develop skills to effectively plan, design, & implement programs that address public health problems for defined populations in a variety of settings. Prerequisites: PubH 6007.

PUBH 6501. Program Evaluation. 3 Credits.
Provides students with the knowledge, competencies and skills to plan and implement and evaluation of health promotion-disease prevention programs for a defined population at risk. Prerequisite: PubH 6002, 6003, 6007, 6500.

PUBH 6502. Practical Data Analysis: PCH. 1 Credit.
Practical aspects of dataset creation, data management, rudimentary statistical analysis & tabular/graphical presentation of results in the user-friendly environments of PASW (formerly SPSS) and MS Excel. Students will create codebooks, enter & clean data, derive new variables from existing ones, choose appropriate analytical techniques & implement them, graph & tabulate results, and document & protect work. Examples will be drawn from commonly-encountered situations in prevention and community health, such as needs assessments & program evaluations. Fall, Spring, Summer.

PUBH 6503. Intro to PubHlth Commnctn&Mktg. 3 Credits.
Communication theories and methods used in promoting health and preventing disease. Theoretical background in communication and behavior science and practical communication development methods. Prerequisite: PubH 6007.

PUBH 6504. Social and Behavioral Science Research Methods. 3 Credits.
The processes of study design, data collection, and analysis using SPSS for quantitative research in prevention and community health. All phases of the observational/survey research process considered sequentially, from formulation of research questions to preparation of the final report. Prerequisites: PubH 6002 and PubH 6007 or instructor permission.

PUBH 6510. COPC Principles and Practice. 3 Credits.
Theory and practice of community-oriented primary care, including an extended small group exercise carrying out a COPC project with a simulated community using Web-based data sets.

PUBH 6512. Comm-OrientedPrimryCarePol&Iss. 2 Credits.
Advanced work on COPC methods and policy, focusing on issues related to the provision of health care in underserved communities. Prerequisite: PubH 6510.

PUBH 6513. Community Health Management. 2 Credits.
Management and development of community health services. Builds upon principles for management and community-oriented primary care. Prerequisite: PubH 6510.

PUBH 6514. Preventing Health Disparities. 2 Credits.
Critical evaluation of the current issues in racial and ethnic issues in health care. Introduces students to differences and disparities in the access, use, and health outcomes of health care in the US.

PUBH 6515. High Risk&Special Populations. 2 Credits.
Provides students with an overview of the methods to plan, implement and evaluation health promotion and education programs targeted towards high risk and special populations. The course will review the socioeconomic, political-economic, cultural and psychosocial factors of populations who are considered to be at high risk for specific health problems and efforts that have been addressed in current health promotion programs. Prerequisite: PubH 6007.
PUBH 6516. Community Health InfoResources. 2 Credits.
COPC and community health promotion require diverse information skills in order to assess community needs and strengths, determine priority health issues, analyze data, plan interventions, and evaluate programs. This course will introduce students to the information resources useful in planning and implementing COPC and community health projects that address racism. The selected resources will support methods for defining a community, characterizing a community’s social and health characteristics, investigating a prioritized problem, and developing programs and solutions. Students will learn how to choose resources, search them, and consider bias in information sources.

PUBH 6530. Qual Methods/Hlth Promotion. 2 Credits.
Application of qualitative methods in the development of health promotion interventions, evaluations, and research. Collecting and analyzing qualitative data through participant observation, interviewing, group methods, and case studies. Prerequisite: PubH 6007.

PUBH 6531. HlthPromotion/HlthCareSettings. 2 Credits.
Behavioral change counseling and training skills to improve health by changing individuals’ behaviors and by developing training materials for use with providers, health professionals and high risk groups. This is an advanced course for second year students. Prerequisite: PubH 6007, 6500.

PUBH 6532. Commnty Org,Devlpmnt&Advocacy. 3 Credits.
Educates health promotion practitioners in how to organize community groups to promote health. The focus is on learning how to use resources available in the community to advocate change. Prerequisite: PubH 6007.

PUBH 6533. Design of Comm Health Surveys. 2 Credits.
This course teaches students how to frame questions in health promotion surveys using sound principles of questionnaire design with emphasis on reliability and validity. Students learn survey design principles and methods and how to analyze survey data.

PUBH 6534. Comm-Based Participatory Res. 1 Credit.
Students learn how to conduct community research in collaboration with community leaders and residents. This course emphasizes the principles of CBPR for addressing health promotion issues in communities including community needs and administrative and policy changes.

PUBH 6535. Promotion of Mental Health. 2 Credits.
Increases understanding about issues in mental health promotion. The emphasis is on mental health as a public health issue and linkages between individual mental health and the environment. Prerequisite: PubH 6007.

PUBH 6536. Workplace Health Promotion. 2 Credits.
Planning, management and evaluation of programs designed to serve employees' needs, promotion of employee health and reduction of health care costs in the workplace. Prerequisite: PubH 6007.

PUBH 6537. Health Promotion & Aging. 2 Credits.
Introduces students to the basic health aspects of the aging process and special health promotion needs for this group. Problems of aging and public health solutions for older Americans will be examined. Students will be able to define the public health concerns for aging Americans, how aging is affected by a multitude of factors, identify health promotion strategies to assist in reaching out to this population and develop methods of collaboration with agencies and organizations to improve the health of the aging population. Prerequisite: PubH 6007.

PUBH 6550. Maternal & Child Health I. 3 Credits.
Public health issues affecting the health and well-being of women, children, and families. A multidisciplinary perspective that integrates the biological, demographic, epidemiological, economic, behavioral, social, cultural and environmental aspects.

PUBH 6551. Maternal & Child Health II. 3 Credits.

PUBH 6552. Women’s Health. 2 Credits.
Issues of women’s health through the life cycle. The process of critically evaluating women’s health research and issues.

PUBH 6553. Adolescent Health. 2 Credits.
Issues of physical, mental, and social development and their bearing on the health of adolescents, with special emphasis on prevention.

PUBH 6554. Children & Youth/Special Needs. 2 Credits.
In order to place children and youth with special needs into a public health framework, this course presents an introduction to and an overview of children and youth with special needs due to a developmental disability. Many aspects of developmental disability will be addressed including ‘concept’ and definitions of disability, causes, epidemiological considerations, and development of federal legislation. The scope and range of developmental disabilities will be reviewed along with classification schemes. Both national and international distributions will be considered from a sociopolitical viewpoint.

PUBH 6555. ReproductvHealth:US&GloblPerspc. 2 Credits.
Reproductive health from a variety of public health perspectives, from defining reproductive health, past perspectives, needed improvements, and the factors that influence reproductive health.

PUBH 6556. Maternal & Child Nutrition. 2 Credits.
Covers the nutritional needs of women during the child bearing years, infants, children and adolescents. The course emphasizes the life course approach to nutrition and has a special emphasis on the effects of diet during infancy on obesity and degenerative diseases in later life. Students will examine the biological basis of nutrition, identify risk factors associated with poor nutrition in individuals and populations and evaluate domestic and international programs. Summer (1-credit) and Spring (2-credits).
PUBH 6557. Child Development & Public Health. 2 Credits.
Examination of the development of children from a public health perspective and provide a detailed examination of the indicators of children’s health that are needed to assist public health professionals improve children’s health.

PUBH 6558. Women, Gender and Health. 2 Credits.
Focuses on gender as a social determinant of health. Emphasis will be placed on examining the frameworks that are used in public health research to understand gender-based issues and how these frameworks affect the types of programs and intervention efforts developed.

PUBH 6559. HIV Prevention: Intradisplay Approch. 2 Credits.
Provides an interdisciplinary overview of HIV prevention research from the behavioral, biological and biomedical perspective. Students are encouraged to approach the assignments and discussions from their own particular expertise and career interests/goals.

PUBH 6560. School Health and Safety. 1, 2 Credit.
Examines the history, organization, financing, and politics of school health programs. It will provide an overview of the core components of school health as defined by the Center for Disease Control and Prevention: health services, health education, physical education, nutrition services, counseling or mental health, school environmental health, health promotion, and family/community involvement. Summer (1 credit); Spring (2 credits).

PUBH 6561. Maternal & Child Health Policy Analysis. 2 Credits.
Provides instruction in maternal and child health policy in the U.S. with a particular emphasis on policies related to the organization, financing, delivery, and quality oversight of personal health services for mothers and children.

PUBH 6562. Physical Activity and Obesity Interventions: From the Individual to the Environment. 2 Credits.
This course will broadly examine the public health issues related to physical activity and obesity, particularly as they relate to solutions for addressing individual factors and the obesogenic environment. Students will gain a further understanding of the social, physiological, behavioral, and environmental factors related to both obesity and physical activity. The course will focus on examining multiple levels of solutions, specifically: 1) individual and behavioral interventions; 2) school-based and community-level interventions; 3) environmental interventions; 4) policy-level interventions. Students will be expected to critically evaluate the necessary components of interventions, and apply that knowledge to future programmatic efforts.

PUBH 6563. Global Child Health. 2 Credits.

PUBH 6570. AdvPubHlthComm: Theory & Prac. 3 Credits.
Focuses on the use of communication to positively influence people’s – and population’s – understanding of health information, decision-making, and health behavior. In this skills-based course students will study, and in a group project apply, a range of theories and techniques germane to effective message design and delivery. Prereq: PubH 6503.

PUBH 6571. Social Mktg: Theory & Practice. 3 Credits.
Focuses on the use of marketing to change the behavior of people, populations, and policy makers in ways that are in their, and society’s, best interest. Students in this skills-based course will study and work in teams to apply a range of marketing strategies to a real-world situation. Prereq: PubH 6503.

PUBH 6572. Marketing Research for Public Health. 3 Credits.
Focuses on the use of marketing research techniques to better understand customers of public health programs, and thereby to improve program design, implementation, and effectiveness. A range of quantitative and qualitative techniques will be studied for their relevance to program planning, development, and continuous improvement.

PUBH 6573. Media Advocacy for Public Health. 3 Credits.
Focuses on the use of communication to positively influence public policy and public opinion. In this skills-based course students will study and apply a range of theories and techniques germane to the policy advocacy process. Prereq: PubH 6503.

PUBH 6574. Pub Hlth Branding Theory & Pract. 2 Credits.
This course focuses on the use of branding in the public health and social sectors. Learning from the commercial sector, we will examine how to brand behaviors as well as products and services. We will review branding methods, examine research on branding and its effectiveness, and build skills in branding for public health objectives.

PUBH 6575. CommunSkills for PubHProfSns. 1 Credit.
Helps students develop writing and oral presentation skills through intensive, interactive training, practice, and feedback. Provides participants with a solid foundation for all forms of public health and other scientific and technical written and oral communication.

PUBH 6590. Intro Social Entrepreneurship. 2 Credits.
Examine innovative organizations created to improve people’s lives and contribute to improved social & economic conditions. Course emphasis on how such organizations are started, how they are sustained, and the various business models that are adopted to achieve an organizational mission.

PUBH 6591. P.A./M.P.H. Clinal Leadership Seminar. 1 Credit.
For first-year physician assistant and master of public health program students, an orientation to their roles as health professionals. Special emphasis on preventive and community medicine.

PUBH 6599. Topics in PCH. 1-3 Credits.
In-depth examination of a particular facet of prevention and community health. Topics and prerequisites vary.
PUBH 6610. Public Health Nutrition Practice and Leadership. 1 Credit.
This course provides an overview of public health nutrition practice. Students develop communication, management and leadership skills necessary for successful careers. Students will also explore potential practicum and culminating experience options, and how to use these experiences to achieve their career goals. This course is designed for first year students in the public health nutrition MPH program.

PUBH 6611. Nutrition Assessment. 2 Credits.
This course examines the anthropometric, biochemical, clinical and dietary methods for assessing nutritional status in individuals. The process of conducting a food and nutrition environment assessments will also be addressed.

PUBH 6612. Food and Water Systems in Public Health. 2 Credits.
This course will take a systems approach to understanding food and water systems and the associated public health issues. We will discuss how our current food system evolved, and how issues such as climate change and population growth may affect food and water systems in the future. The role of public health practitioners in meeting the population’s need for safe, sufficient and nutritious food and clean drinking water will be discussed. The course will also examine policies, programs, and proposals aimed at creating healthier, more sustainable food and water systems.

PUBH 6613. US Food Policy and Politics. 2 Credits.
The programs, regulations and legislation that pertain to food production, food safety, nutrition assistance and dietary guidance in the United States at the federal, state and local levels.

PUBH 6699. Topics in Nutrition Sciences. 1-3 Credits.
Examination of a particular facet of nutrition sciences. Topics vary by semester. May be repeated for credit provided topic differs. See the Schedule of Classes for more details.

PUBH 6999. MS Epidemiology Thesis Resch. 2 Credits.
PUBH 8242. DPH Topics: ClinEpi&DecAnalysis. 1 Credit.
PUBH 8244. DPH Topics: Cancer Epidemiology. 1 Credit.
Course focuses on critical review and interpretation of cancer epidemiology literature as well as issues in research design in the field. Prerequ:PubH 6001 & PubH 6003. Corequis: PubH 6244.
PUBH 8245. DPH Topics: InfectDiseaseEpi. 1 Credit.
Provides doctoral level material on the content of infectious disease epidemiology. The course focuses on critical review and interpretation of infectious disease literature as well as issues preparing an analytic research paper on an emerging infectious disease and the application of tools used to describe the epidemiology of those diseases. Prerequ: PubH 6003. Corequis: PubH 6245. Spring.
PUBH 8250. DPH Topics: Epi of HIV/AIDS. 1 Credit.
Students select specific topic within area of HIV/AIDS epidemiology. Options include responding to a data analysis problem; responding to a methodological problem found within HIV/AIDS research; or another topic approved by instructor. Prerequ: PubH 6001 & PubH 6003. Corequis: PubH 6250.
PUBH 8259. DPH Topics: EpiSurveillanceinPH. 1 Credit.
Course provides doctoral level material on the content of surveillance offered in PubH 6259. Focus is on critical review and interpretation of surveillance literature as well as issues preparing an analytic research paper. Prerequ: PubH 6002 & PubH 6003. Corequis: PubH 6259.
PUBH 8364. Quantitative Methods. 3 Credits.
Introduces basic concepts in mathematical statistics. Topics will include probabilities (unconditional and conditional), density and distribution functions of continuous and discrete random variables, including expected values. Specific distribution functions discussed will be Binomial, Poisson, Hypergeometric, and Gaussian distributions. Additional topics include bivariable distributions, variance-covariance matrix, limiting theory, asymptotic results, and maximum likelihood estimation. Prerequisites: Math 1231, 1232 and PubH 6002, 6249.
PUBH 8365. Design of Medical Studies. 3 Credits.
Design of medical investigations, including the randomized clinical trial, observational cohort study, and the retrospective case-control study. Specific methods regarding sample size, power and precision and statistical procedures for randomization and sampling. Ethics of clinical trials and the intention-to-treat principle. Prerequisite: PubH 6002.
PUBH 8366. Biostatistical Methods. 3 Credits.
Biostatistical methods for asymptotically efficient tests and estimates of relative risks and odds ratios from prospective and retrospective matched and unmatched studies. Fixed and random effects models. Logistic regression, conditional logistic regression. Poisson regression. Maximum likelihood and efficient scores. Prerequisites: STAT 6202 or Instructor’s permission.
PUBH 8401. Found PH Leadership & Practice. 3 Credits.
This interactive seminar course provides doctoral students a fundamental understanding of the history and current issues associated with the four principal program areas: Health Policy, Health Behavior, Global Health & Environmental & Occupational Health.
PUBH 8402. Ldrshp/PublicHlthPractc&Policy. 2 Credits.
Principles of public health practice and policy with a focus on the interdisciplinary and strategic application of skills, knowledge and competencies necessary both to perform public health core functions and to enhance the capacity to perform these functions.
PUBH 8404. AdvTpc-HlthSystms&HlthPolRsrch. 3 Credits.
Examination and assessment of issues related to the intersection of healthcare systems and health policy, and how health policy and health services research can inform the development and evaluation of healthcare systems and health policy. Prereq: PubH 6315.

PUBH 8405. Adv Health Economics Research. 3 Credits.
Examines a range of critical financing issues for U.S. public health and health care services/systems. Considers the role of health services research in (1) understanding the effects of these issues and (2) informing the deliberations and decisions of policymakers. Prereq: PubH 6340.

PUBH 8406. AdvTpc-HlthResrch/GlobalArena. 3 Credits.
Alternative field methods adopted from sociology, anthropology, economics, and political sciences for social sciences and policy research. Builds data collection, instruments, measurements, indicators, and data analysis and interpretation skills in specific socio-cultural contexts. Explores ethical issues in international research.

PUBH 8407. AdvTp:Hlth Ledrshp/Intl Settng. 3 Credits.
A participatory graduate seminar providing a continuity bridge for departmental DrPH students progressing into the second and third years of academic study. Designated to provide students with the tools and experience needed to build their capacity for leadership in global health. Prerequisite: PubH 8406. As needed.

PUBH 8408. AdvTp-HlthBehavRes&PractcAppl. 3 Credits.
Advanced topics relating theory to practice in areas of health education and behavioral change. Application of qualitative and quantitative research to health related behavior at individual and community levels.

PUBH 8409. Advanced Topics: Health Communication Research. 3 Credits.
Methods of communications research designed to alter health behavior. Emphasis on critical analysis of communications research aimed at the mass public, groups, and interpersonal level.

PUBH 8411. Advanced Topics - Principles of Human Health Risk Science. 3 Credits.
This course provides the doctoral student with a comprehensive orientation to the frameworks, principles and issues involved in assessing, managing and communicating environmental health risks. This fundamental, interdisciplinary course is designed to foster dialogue and insights about contemporary risk science and management issues, including ethical concerns and technical issues that influence policy making. Restricted to EOH DrPH students or by permission of the instructor.

PUBH 8412. Advanced Topics - Environmental and Occupational Health Research and Practice. 3 Credits.
This course exposes students to the theory and reality of both research and practice in environmental and occupational health. There is an emphasis on the use of public health science in policy and regulatory decisions.

PUBH 8413. Research Leadership. 1-10 Credits.
Students participate in a range of activities designed to develop and enhance their research methods and analytic skills. These activities include participating in the development and submission of sponsored research proposals; being formally affiliated with a research project, assuming responsibility for completing a real-world research project; engaging in empirical data collection and analysis efforts.

PUBH 8414. Policy and Management Leadership. 1-10 Credits.
Students develop and enhance their management, leadership, and policymaking skills for problem solving in real-world settings; public health departments, community health centers, legislative settings, and public or teaching hospitals.

PUBH 8415. Instructional Leadership. 1-10 Credits.
Students participate in a range of activities designed to develop and enhance their teaching skills. These activities include course development, teaching master’s level courses, acting as TA for undergraduate courses, advising students about their class performance, evaluating student performance, and developing remedial programs for students.

PUBH 8416. Study Design & Evaluation Methods. 3 Credits.
Prepares doctoral students to design and conduct program and policy evaluation in public health. Intensive introduction to the principles of study program design and evaluation research emphasizing the ability to synthesize the population-based intervention literature, apply planning and management methods, describe and apply research methods from a range of disciplines, and prepare a program research proposal.

PUBH 8417. Qual Research Methods&Analysis. 3 Credits.
Techniques for designing and conducting qualitative research and for analyzing and reporting qualitative data relevant to program development and implementation, community assessment, and policy analysis. Prerequisite: PubH 8416.

PUBH 8418. Applied Statistical Analysis. 3 Credits.
Intensive course in data management and data analysis using STATA®. Database management system techniques and data analytical strategies for the appropriate analysis of data sets obtained from a variety of studies will be presented. The student will manipulate national data sets from epidemiological studies as well as Demographic and Health Survey (DHS) data. Prereq: PubH 8416.

PUBH 8419. Measrmnt/PubHlth&HlthSrvcsRes. 3 Credits.
In this course students review principles of measurement and assessment as they apply to public health and health services research constructs, review existing state-of-the-art measures of individual and population health status (e.g., morbidity, mortality, functioning and health-related quality of life) and of individual and community health behavior, and explores current measurement issues in health research. Prerequisite: PubH 8418.
PUBH 8420. Advanced Analysis & Dissemination. 3 Credits.
Advanced multivariate data analyses of complex datasets and programs, including advanced cross-sectional techniques, time-series analysis, and the use of panel data. Evaluation of results, and dissemination of findings to relevant stakeholders. Prereq: PubH 8417, 8418.

PUBH 8422. AdvHlthCare&PublcHlthRsrchDes. 2 Credits.
Design of protocol suitable for implementation as part of Doctor of Public Health dissertation requirement. Prerequisites: Passing Comprehensive Exams, Approval of the Program Director, and a page-long abstract that includes the following: Student Name, Program Director, Faculty Advisor if different from the Program Director, Title, Objective (including population), Research Methods and Analysis Methods, Anticipated Results/Hypotheses. Grade = Credit/No Credit.

PUBH 8423. Dissertation Research. 1-12 Credits.
Dissertation Research for DrPH. Prereq: PubH 8422.

PUBH 8999. Dissertation Research. 1-12 Credits.
Dissertation research.