School of Public Health

About the School of Public Health

In 1964 President Lyndon Johnson said, "We have the power to shape the civilization that we want. But we need your will, your labor, your hearts, if we are to build that kind of society." He was, of course, speaking about the "Great Society" initiative that sought to eliminate the oppression of poverty for millions who wanted to share in the American dream. We have learned much in the intervening forty years - that good intentions and money don't often solve complex social and cultural dilemmas; that the technology genie will not go back into the bottle; that we are milliseconds from every nation, every person on the globe.

More than any other discipline, public health has the power to help shape civilization in the 21st century. The UAB School of Public Health offers you the opportunity to join a vibrant community of professionals and scholars whose global-class research and scholarship is exploring complex problems like HIV/AIDS, obesity, and drugs in creative and unusual ways. A graduate degree in public health gives you the ability to tackle head-on the most complicated and thorny issues of our times, the tools to create solutions for those issues, and a uniquely global perspective.

The challenges for the future of public health find an ideal home at UAB. The interests of our faculty and staff extend from community organization in the Black Belt regions of rural Alabama to understanding the dynamics of the HIV epidemic in Sub-Saharan Africa. Few universities offer the almost limitless interdisciplinary collaborative atmosphere available to students at the UAB School of Public Health.

The potential for our students to develop practical and meaningful internship experiences grows daily through partnerships with state and local government agencies, local businesses and industry, and a global network of governmental and non-governmental organizations. The faculty and staff at the School are dedicated and deeply committed to educating and preparing the most well-educated and qualified public health graduates imaginable for the 21st century. We look forward to welcoming you as a student in the School of Public Health. Our dynamic, robust, and exciting programs are a great beginning for launching a truly satisfying career.

Contact Information

Dean: Max Michael, MD
Associate Dean of Graduate Education: Peter Ginter, PhD
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Admission Requirements

Our graduate programs in biostatistics, environmental health, epidemiology, health behavior, and health care organization and policy offer students intellectual tools to address complex problems with a global perspective. Whether you are looking for a highly-rated program that provides the opportunity to work next to leading researchers or a graduate student looking for information related to your studies, we have everything you need. Click the applicable link below for information related to your particular need.

The UAB School of Public Health uses SOPHAS, the Centralized Application Service for Public Health for some of its programs. The Application Fee is $120.00 for the first school that the student applies to. See our Application Process web page (http://www.soph.uab.edu/graduate/prospective/admissions/us) for further information.

The University of Birmingham's Graduate School uses ApplyYourself as its centralized application management solution. The Application Fee for Apply Yourself for Domestic Students is $60.00. See our Application Process web page (http://www.soph.uab.edu/graduate/prospective/admissions/us) for further information.

Click here (http://www.soph.uab.edu/graduate/prospective) for more information.

Additional Information

Deadline for All Applications:
- US Applicants: Fall - July 15
- International Applicants: Fall – May 15
- US & International Applicants Spring - November 1
- US & International Applicants Summer – April 1
- Doctoral Programs: Varies by departments

Entrance Test: http://www.soph.uab.edu/prospective/testing

International Transcripts: International transcripts must be submitted to World Education Services (WES) or Educational Credential Evaluators (ECE) for an official course-by-course credential evaluation (document-by-document evaluations will not suffice).

Number of Evaluation Forms Required: Three

SOPH Catalog: www.soph.uab.edu/catalog

DEGREES OFFERED

Master of Public Health (M.P.H.)

Prospective students should click here (http://www.soph.uab.edu/apply) to obtain specific admission requirements on how to apply.

Biostatistics Concentrations:
- Biostatistics

Environmental Health Concentrations:
- Accelerated Program Industrial Hygiene
- Environmental Health & Toxicology (also online)
- Fast Track MPH in EHS
- Industrial Hygiene (also online)
- Occupational Health & Safety (also online)

Epidemiology Concentrations:
- Epidemiology
- Fast Track MPH in EPI
### Health Behavior Concentrations:
- Health Behavior (also online)
- Fast Track MPH in HB
- Health Behavior/Nursing
- MPH/Psychology PhD
- MPH/Sociology PhD

### Health Care Organization and Policy Concentrations:
- Fast Track MPH in HCOP
- General Theory & Practice
- Health Care Organization (also online)
- Health Policy
- Maternal and Child Health Policy and Leadership (also online)
- Maternal & Child Health/Social Work (also Online)(with UA)
- Maternal and Child Health/Nursing
- Maternal and Child Health Policy and Leadership
- MPH/Business Administration (UAB)
- MPH/Doctor of Optometry (UAB)
- MPH/Juris Doctorate (Samford)
- MPH/Public Administration (UAB)

### General PUH Tracks:
- MPH/Doctor of Medicine (UAB)
- MPH/Doctor of Veterinary Medicine (Auburn)
- MPH/Doctor of Dental Medicine (UAB)
- MPH/Doctor of Osteopathic Medicine (Dothan, AL)
- MPH/PhD Biomedical Sciences (UAB)
- MPH/Doctor of Philosophy (Auburn)

### Master of Science in Public Health (M.S.P.H.)
Prospective students should click here (http://www.soph.uab.edu/apply) to obtain specific admission requirements on how to apply.

#### Biostatistics Concentrations:
- Clinical and Translational Science (BST)
- Environmental Health & Toxicology
- Industrial Hygiene
- Clinical and Translational Science (EPI)
- Pharmacoepidemiology and Comparative Effectiveness Research
- Applied Epidemiology

#### Health Behavior Concentrations:
- Clinical and Translational Science (HB)

### Health Care Organization & Policy Concentrations:
- MSPH/ Psychology PhD (UAB and UA)
- Outcomes Research
- MSPH/Doctor of Medicine (UAB)

### Master of Science (M.S.)
Prospective students should click here (http://www.soph.uab.edu/apply) to obtain specific admission requirements on how to apply.

#### Biostatistics Concentration:
- Biostatistics

#### Doctor of Philosophy (Ph.D.)
Prospective students should click here (http://www.soph.uab.edu/apply) to obtain specific admission requirements on how to apply.

#### Biostatistics Concentration:
- Biostatistics

### Doctor of Public Health (Dr.P.H.)
Prospective students should click here (http://www.soph.uab.edu/apply) to obtain specific admission requirements on how to apply.

#### Health Care Organization & Policy Concentrations:
- Public Health Management
- Maternal and Child Health Policy
- Outcomes Research

For detailed information about the graduate programs offered, please consult the School of Public Health website (http://www.uab.edu/PublicHealth) or visit the UAB School of Public Health:

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E-mail: soph@uab.edu
Website: www.uab.edu/PublicHealth

### BST-Biostatistics Courses

**BST 601. Biostatistics. 4 Hours.**
Logic and language of scientific methods in life science research; use of basic statistics in testing hypotheses and setting confidence limits. Simple and multiple regression and elementary experimental designs. No prerequisites but a familiarity with basic algebra is important.

**BST 601A. Biostatistics. 4 Hours.**
Logic and language of scientific methods in life science research; use of basic statistics in testing hypotheses and setting confidence limits. Simple and multiple regression and elementary experimental designs. No prerequisites but familiarity with basic algebra is important.
BST 603. Introductory Biostatistics for Graduate Biomedical Sciences. 3 Hours.
This course will utilize current statistical techniques to assess and analyze health science related data.

BST 607. Environmental Sampling and Exposure Assessment. 3 Hours.
Application of statistical techniques including use of lognormal distribution for environmental and occupational health exposure assessment problems. Spatial and temporal correlations are discussed and appropriate analysis techniques are described for these situations using statistical software packages.

BST 608. Statistical Modeling in Clinical and Epi Studies. 3 Hours.
Provide an understanding of modeling approaches to address the challenges of "real life" data sets in the framework of linear models as they relate to clinical and epidemiological studies.
Prerequisites: BST 602 [Min Grade: C] and BST 612 [Min Grade: C]

BST 611. Intermediate Statistical Analysis I. 3 Hours.
Students will gain a thorough understanding of basic analysis methods, elementary concepts, statistical models and applications of probability, commonly used sampling distributions, parametric and non-parametric one and two sample tests, confidence intervals, applications of analysis of two-way contingency table data, simple linear regression, and simple analysis of variance. Students are taught to conduct the relevant analysis using current software such as the Statistical Analysis System (SAS).

BST 611Q. Intermediate Statistical Analysis I Online. 3 Hours.
This course will utilize current statistical techniques to assess and analyze public health related data. In addition, students will learn to read and critique the use of such techniques in published research. Students will also determine what analytical approaches are appropriate under different research scenarios.
Prerequisites: BST 611 [Min Grade: C]

BST 612. Intermediate Statistical Analysis II. 3 Hours.
This course will introduce students to the basic principles of tools of simple and multiple regression. A major goal is to establish a firm foundation in the discipline upon which the applications of statistical and epidemiologic inference will be built. If prerequisite is not met, permission of instructor is required.
Prerequisites: BST 611 [Min Grade: C]

BST 612Q. Intermediate Statistical Analysis II Online. 3 Hours.
This course will utilize current statistical techniques to assess and analyze public health related data. In addition, students will learn to read and critique the use of such techniques in published research. Students will also determine what analytical approaches are appropriate under different research scenarios.
Prerequisites: BST 611 [Min Grade: C]

BST 613. Intermediate Statis Analy III. 3 Hours.
This course will introduce students to additional general concepts in biostatistics beyond an introductory level to include study design, power and sample size estimation, mixed-models, survival analysis, survey design and interpretation of research results.
Prerequisites: BST 612 [Min Grade: C]

BST 619. Data Collection and Management. 3 Hours.
Basic concepts of study design, forms design, quality control, data entry, data management and data analysis. Hands-on experience with data entry systems, e.g., DBASE, and data analysis software, e.g., PC-SAS. Exposure to other software packages as time permits. Previous computer experience or workshop on microcomputers highly recommended.
NOTE: If space permits, non-degree graduate students will be permitted to enroll. All students registered for the course must attend 1st class to remain enrolled. Previous computer experience or workshop on microcomputers highly recommended.
Prerequisites: BST 601 [Min Grade: C] or BST 611 [Min Grade: C] or BST 621 [Min Grade: C]

BST 620. Applied Matrix Analysis. 3 Hours.
Vector and matrix definitions and fundamental concepts; matrix factorization and application. Eigen-values and eigen-vectors, functions of matrices, singular and ill-conditioned problems.
Prerequisites: BST 622 [Min Grade: C]

BST 621. Statistical Methods I. 3 Hours.
Mathematically rigorous coverage of applications of statistical techniques designed for Biostatistics majors and others with sufficient mathematical background. Statistical models and applications of probability; commonly used sampling distributions; parametric and nonparametric one and two sample tests and confidence intervals; analysis of two-way contingency table data; simple linear regression; simple analysis of variance designs with equal or proportional subclass members; use of contrasts and multiple comparisons procedures; introduction to survival analysis; multivariate methods. Interested students must have a year of calculus sequence before enrolling in BST 621.

BST 622. Statistical Methods II. 3 Hours.
Mathematically rigorous coverage of applications of statistical techniques designed for Biostatistics majors and others with sufficient mathematical background. Statistical models and applications of probability; commonly used sampling distributions; parametric and nonparametric one and two sample tests and confidence intervals; analysis of contingency tables; simple linear regression; simple analysis of variance designs with equal or proportional subclass members; use of contrasts and multiple comparisons procedures; introduction to survival analysis; multivariate methods.
Prerequisites: BST 621 [Min Grade: C]

BST 623. General Linear Models. 3 Hours.
Simple and multiple regression using matrix approach; weighted and non-linear regression; variable selection methods; modeling techniques; regression diagnostics and model validation; systems of linear equations; factorial designs; blocking; an introduction to repeated measures designs; Coding schemes.
Prerequisites: BST 622 [Min Grade: C]

BST 624. Experimental Design. 3 Hours.
Intermediate experimental design and analysis of variance models using matrix approach. Factorial and nested (hierarchical) designs; blocking; repeated measures designs; Latin squares; incomplete block designs; fractional factorials; confounding. Students should have had matrix algebra as a prerequisite.
Prerequisites: BST 623 [Min Grade: C]

BST 625. Design/Conduct Clinical Trials. 3 Hours.
Concepts of clinical trials; purpose, design, implementation and evaluation. Examples and controversies presented.
Prerequisites: BST 611 [Min Grade: C] and BST 612 [Min Grade: C] or BST 621 [Min Grade: C] and BST 622 [Min Grade: C]
BST 626. Data Management and Reporting with SAS. 3 Hours.
A hands-on exposure to data management and report generation with one of the most popular statistical software packages. Concurrent registration in BST 626L is required. Note: Non-degree graduate students will be allowed to register if space permits.

BST 626L. Data Management and Reporting with SAS Laboratory. 0 Hours.
A hands-on exposure to data management and report generation with one of the most popular statistical software packages.

BST 626Q. Data Management and Reporting with SAS. 3 Hours.
This course is designed to provide an introduction to data management and reporting using the SAS system. Students who have some PC computer experience or who have been introduced to SAS are eligible to take this course. Any student taking this course should be familiar with simple summary statistics such as the mean, standard deviation, standard error, median and percentiles as well as proportions. Outside of familiarity with these basic statistics, no other statistical background is required. Though not required, some programming background will be useful as this assures the instructor that the student is familiar with the logic critical in understanding conditional execution commonly used in SAS.

BST 631. Statistical Theory I. 4 Hours.
Fundamentals of probability; independence; distribution and density functions; random variables; moments and moment generating functions; discrete and continuous distributions; exponential families, marginal and conditional distributions; transformation and change of variables; convergence concepts, sampling distributions. Point and interval estimation; hypothesis and significance testing; sufficiency and completeness; ancillary statistics; maximum likelihood and moment estimators; asymptotic properties of estimators and tests; introduction to Bayesian inference. Prerequisite: Advanced Calculus.

BST 632. Statistical Theory II. 4 Hours.
Fundamentals of probability; independence; distribution and density functions; random variables; moments and moment generating functions; discrete and continuous distributions; exponential families, marginal and conditional distributions; transformation and change of variables; convergence concepts, sampling distributions. Point and interval estimation; hypothesis and significance testing; sufficiency and completeness; ancillary statistics; maximum likelihood and moment estimators; asymptotic properties of estimators and tests; introduction to Bayesian inference. Prerequisite: BST 631 [Min Grade: C]

BST 640. Nonparametric Methods. 3 Hours.
Properties of statistical tests; order statistics and theory of extremes; median tests; goodness of fit; tests based on ranks; location and scale parameter estimation; confidence intervals; association analysis; power and efficiency. Prerequisites: BST 621 [Min Grade: C] and BST 631 [Min Grade: C]

BST 655. Categorical Data Analysis. 3 Hours.
Logistic regression models; regression diagnostics; proportional odds; ordinal and polytomous logistic regression; analyses for multi-way tables; Mantel-Haenszel test; measures of association and of agreement; loglinear and logit models; ordinal discrete data; matched pairs; repeated categorical data. BST 612 or equivalent recommended as a prerequisite. Prerequisites: BST 622 [Min Grade: C]

BST 660. Applied Multivariate Analysis. 3 Hours.
Analysis and interpretation of multivariate general linear models including multivariate regression, multivariate analysis of variance/covariance, discriminant analysis, multivariate analysis of repeated measures, canonical correlation, and longitudinal data analysis for general and generalized linear models. Extensive use of SAS, SPSS, and other statistical software. Prerequisites: BST 623 [Min Grade: C]

BST 661. Structural Equation Modelling. 3 Hours.
Basic principles of measurements; factor analysis and latent variable models; multivariate predictive models including mediation mechanisms and moderators effects; path analysis; interpretative multivariate covariance models, methods of longitudinal analysis. Prerequisites: BST 623 [Min Grade: C]

BST 665. Survival Analysis. 3 Hours.
Design and analysis of clinical trials; sample size computation; properties of survival distributions; estimation and hypothesis testing for survival parameters; Kaplan-Meier estimation; exponential tests; Cox proportional hazards regression models, parametric survival models. Prerequisites: BST 622 [Min Grade: C]

BST 670. Sampling Methods. 3 Hours.
Simple random, stratified, cluster, ratio regression and systematic sampling; sampling with equal or unequal probabilities of selection; optimization; properties of estimators; non-sampling errors; sampling schemes used in population research; methods of implementation and analyses associated with various schemes. Prerequisites: BST 631 [Min Grade: C]

BST 671. Meta-Analysis. 3 Hours.
Statistical methods and inference through meta analysis. Prerequisites: BST 623 [Min Grade: C] and BST 632 [Min Grade: C]

BST 675. Introduction to Statistical Genetics. 3 Hours.
This course will introduce students to population genetics, genetic epidemiology, microarray and proteomics analysis, Mendelian laws, inheritance, heritability, test cross linkage analysis, QTL analysis, human linkage and human association methods for discrete and qualitative traits. Prerequisites: BST 611 [Min Grade: C] or BST 621 [Min Grade: C]

BST 676. Genomic Data Analysis. 3 Hours.
Algorithms and methods that underlie the analysis of high dimensional biological data, as well as issues in the design and implementation of such studies. High dimensional biology includes microarrays, proteomics, genomic, protein structure, biochemical system theory and phylogenetic methods. NOTE: Some knowledge of statistics (MTH 180 or BST 621) also some bio-informatics/high dimensional biology training (CS 640, MIC 753, or BST 675 is required. Interested students are urged to contact the instructors with concerns regarding assumed knowledge. Prerequisites: BST 611 [Min Grade: C] or BST 621 [Min Grade: C]

This course is mainly focused on R and how to use R to conduct basic statistical computing. The course contains three themes: R programming, introduction to high performance computing, and basics of statistical computing. Prerequisites: BST 621 [Min Grade: C] and BST 622 [Min Grade: C] and BST 626 [Min Grade: C] and BST 631 [Min Grade: C] and BST 632 [Min Grade: C]
BST 690. Biostatistical Consulting and Applied Problems. 3 Hours.  
Students will work individually to address, analyze and present the results of an applied problem or grant design each week. The presentation of approaches, solutions and designs will be conducted in a round table format. Students will be evaluated on the quality of solution and by their presentation and class participation.  
Prerequisites: BST 621 [Min Grade: C] and BST 622 [Min Grade: C] 

BST 691. Pre-Doctoral Seminar Series. 1 Hour.  
Biostatistics Seminar Series. This course is restricted to Biostatistics in Public Health majors only. 

BST 695. Special Topics. 1-3 Hour.  
Special topics in Biostatistics not covered in regular 600 level courses, but suited for Masters students in Biostatistics and doctoral students in other related disciplines.  
Prerequisites: BST 631 [Min Grade: C] and BST 632 [Min Grade: C] 

BST 697. Internship in Biostatistics. 3 Hours.  
Field Experience under joint direction of appropriate public health faculty member and qualified specialists working in selected aspects of public health.  
Prerequisites: BST 601 [Min Grade: C] or BST 611 [Min Grade: C] and BST 612 [Min Grade: C] and ENH 600 [Min Grade: C] and EPI 600 [Min Grade: C] and HB 600 [Min Grade: C] and HCO 600 [Min Grade: C] 

BST 698. Non Thesis Research. 1-12 Hour.  
Independent non-thesis research with guidance of appropriate faculty. Restricted to Biostatistics Majors only or permission of instructor / department. 

BST 699. Thesis Research. 1-12 Hour.  
Thesis Research under the direction of research committee. At least 6 graduate credits needed for graduation. Must be admitted to candidacy. 
Prerequisites: GAC M 

BST 723. Theory of Linear Models. 3 Hours.  
Multivariate normal distributions and quadratic forms; least square estimation; nested models; weighted least squares, testing contrasts; multiple comparison; polynomial regression; maximum likelihood theory of log linear models will be studied.  
Prerequisites: BST 632 [Min Grade: C] 

BST 725. Advances Clinical Trials. 3 Hours.  
This course will provide students with the tools to develop a basic understanding of the fundamental statistical principles involved in the design and conduct of clinical trials.  
Prerequisites: BST 611 [Min Grade: C] and BST 612 [Min Grade: C] or BST 621 [Min Grade: C] and BST 622 [Min Grade: C] and BST 625 [Min Grade: C] 

BST 726. Adv Clin Trials II. 3 Hours.  
Students will develop a more thorough understanding of the basic methodology behind important statistical concepts used in the design and analysis of large randomized clinical trials.  
Prerequisites: BST 621 [Min Grade: C] and BST 622 [Min Grade: C] and BST 625 [Min Grade: C] and BST 631 [Min Grade: C] and BST 632 [Min Grade: C] and BST 725 [Min Grade: C] 

BST 735. Advanced Inference. 4 Hours.  
Families of models; likelihood; sufficiency; significance tests; similar regions; point and interval estimation; invariant tests; asymptotic theory and large sample inference; LR, score and Wald tests; robust procedures will be studied.  
Prerequisites: BST 632 [Min Grade: C] and BST 631 [Min Grade: C] 

BST 740. Bayesian Analysis. 3 Hours.  
To introduce the student to the basic principles and tools of Bayesian Statistics and most importantly to Bayesian data analysis techniques. A major goal is to establish a firm foundation in the discipline upon which the applications of statistical and epidemiologic inference will be built.  
Prerequisites: BST 632 [Min Grade: C] 

BST 741. Advanced Bayesian Analysis II. 3 Hours.  
This course is intended to illustrate advanced Bayesian modeling and computation for variety of models and problems.  
Prerequisites: BST 622 [Min Grade: C] and BST 632 [Min Grade: C] 

BST 750. Stochastic Modeling. 3 Hours.  
Poisson processes; random walks; simple diffusion and branching processes; recurrent events; Markov chains in discrete and continuous time; birth and death process; queuing systems; applications to survival and other biomedical models will be studied.  
Prerequisites: BST 632 [Min Grade: C] 

BST 760. Generalized Linear and Mixed Models. 3 Hours.  
Generalized linear models; mixed models; and generalized estimating equations.  
Prerequisites: BST 723 [Min Grade: C] 

BST 775. Statistical Methods for Genetic Analysis I. 3 Hours.  
This course will provide a statistical basis for describing variation in qualitative (disease) and quantitative traits. This will include decomposition of trait variation into components representing genes, environment and gene-environment interaction. Resemblance between relative and heritability will be described. Important topics of discussion will include oligogenic and polygenic traits, complex segregations analysis, methods of mapping and characterizing simple and complex trait loci. NOTE: It is assumed that students are comfortable with regression theory, covariance, correlation, and likelihood theory. Interested students are urged to contact the instructors with concerns regarding assumed knowledge.  
Prerequisites: BST 623 [Min Grade: C] and BST 632 [Min Grade: C] and BST 675 [Min Grade: C] 

BST 776. Statistical Methods for Genetic Analysis II. 3 Hours.  
This course builds on the knowledge gained in BST 775 with rigorous mathematical & statistical treatment of methods for localizing genes and environmental effects involved in the etiology of complex traits using case-control and pedigree data. NOTE: Knowledge of SAS and programming languages such as C++, and basic knowledge of multivariate methods and Markov chain theory is highly recommended.  
Prerequisites: BST 775 [Min Grade: C] 

BST 793. Post-doc Seminar Series. 3 Hours.  
BST seminar series. Permission of instructor / department required. 

BST 795. Advanced Special Topics. 1-3 Hour.  
This course is designed to cover advanced special topics in Biostatistics that are not covered in regular 700 level courses, but suited for doctoral students in Biostatistics.  
Prerequisites: BST 622 [Min Grade: C] and BST 632 [Min Grade: C]
ENH-Environmental Health Sci Courses

ENH 600. Fundamentals of Environmental Health Science. 3 Hours.
This introductory course is designed to teach public health graduate students the fundamental concepts of Environmental Health Science, the scientific research methods used to study the interaction between human health and the environment, and basic issues in the environmental management of occupational and environmental health problems. Preq: Admission into the MPH program or permission of instructor. College level biology and/or chemistry strongly recommended.

ENH 600Q. Fundamentals of Environmental Health Science Online. 3 Hours.
This introductory course is designed to teach public health graduate students the fundamental concepts of Environmental Health Science, the scientific research methods used to study the interaction between human health and the environment, and basic issues in the environmental management of occupational and environmental health problems. Preq: Admission into the MPH program or permission of instructor. College level biology and/or chemistry strongly recommended.

ENH 601. Environmental Chemistry. 3 Hours.
The course examines the chemical processes that are responsible for the natural characteristics of the environment (air, water and soil) as well as those impacted by man-made activities. The overall objective is to introduce basic chemistry principles, apply them to understand atmospheric, water and soil environmental systems, and study the fate and impacts of ubiquitous chemical species introduced by man-made activities. The course is structured to analyze the following thematic domains: i) aquatic chemistry and microbial chemistry; ii) atmospheric chemistry; iii) water chemistry; iv) soil chemistry; v) wastes chemistry and (vi) special long-lasting and emerging environmental chemistry issues including climate change, carbon cycling, water quality and resource management, ozone hole, wastes management and recycling.

ENH 602. Environmental Management. 3 Hours.
Comprehensive introduction to environmental management, with emphasis on environmental health issues. Cases from both U.S. and international settings. Key topics include air and water contamination, hazardous materials, ozone depletion, climate change, risk perception, risk management, environmental communication, environmental regulation, and recent strategies for environmental management.

ENH 603. Management of Occupational Health and Safety Program. 3 Hours.
Provides an overview of management principles as they relate to occupational safety and industrial hygiene, emphasizing the development of the "soft" skills. It provides management training as well as communication techniques for illustrating and justifying changes that are technically sound. The course will review theoretical and practical principles of managing safety and industrial hygiene programs. Real world examples are used to support management theories.

ENH 605. Remote Sensing and Public Hlth. 3 Hours.
Observing global patterns via satellites can help with research endeavors, this course will focus on the applications of remote sensing to both health and the social sciences. Hands on experience using satellite remote sensing will enrich the experience. This course will give students the chance to learn about a wide range of remote sensing applications in both classrooms and lab settings. The course will progress from basic remote sensing analysis techniques to the point where the students are responsible for their own research projects.

ENH 608. Real World Remote Sensing. 3 Hours.
This course will give students the chance to learn about a wide range of advanced remote sensing applications in both classroom and lab settings. This course will start out with an overview of article publication preparation and the importance of combining GIS and remote sensing data. This course will progress to students learning GIS applications and analytical techniques and how to input their remote sensing data into their own GIS for additional analysis.

ENH 609. Field Studies in Jamaica. 3 Hours.
This intensive summer course is held in Jamaica and is an overview of infectious disease surveillance and control with an emphasis on practical public health field experience.

ENH 609Q. Climate Change and Global Health. 3 Hours.
This course will provide students an overview of the driving forces and mechanics of climate change and a comprehensive analysis of the implications on Earth’s natural/human ecosystems and health in a local, regional and global scale. The concepts, approaches and uncertainties of methods applied to assess and monitor the health impacts of climate change will be presented and specific disease cases will be discussed.

ENH 610. Environmental Disasters. 3 Hours.
Examines the worldwide problem of toxic disasters, particularly those involving invisible agents (chemicals, infectious disease agents, radiation). Theory, case studies, field experience, and current scientific research are reviewed, and the public health, environmental, human services and public policy implications of toxic disasters are discussed.

ENH 610Q. Environmental Disasters (Online). 3 Hours.
Examines the worldwide problem of toxic disasters, particularly those involving invisible agents (chemicals, infectious disease agents, radiation). Theory, case studies, field experience, and current scientific research are reviewed, and the public health, environmental, human services and public policy implications of toxic disasters are discussed.

ENH 611. Environmental & Occupational Exposure Assessment. 3 Hours.
This course is intended to develop an understanding and appreciation of environmental exposure assessment and its role in providing the tools and information for toxicology, epidemiology, and risk management. The course material introduces the general concepts of first recognizing environmental exposures to chemicals in human populations, and then using sampling techniques to assess exposures. This is a designated service learning course.

ENH 611Q. Environmental & Occupational Exposure Assessment Online. 3 Hours.
This course is intended to develop an understanding and appreciation of environmental exposure assessment and its role in providing the tools and information for toxicology, epidemiology, and risk management. The course material introduces the general concepts of first recognizing environmental exposures to chemicals in human populations, and then using sampling techniques to assess exposures.
ENH 611. Fundamentals of Industrial Hygiene Online. 3 Hours.
Chemical, physical and other hazards and stresses found in the work environment. Recognizing potential hazards by understanding industrial processes, toxicity of environmental contaminants and occupational disease processes. Study design and preparation for field evaluation, conduct of industrial hygiene surveys, and interpretation of survey results.

ENH 612. Assessing & Managing Environmental Risks. 3 Hours.
The purpose of this course is to provide students with an overview of environmental policy, with a focus on demonstrating how toxicology and exposure measurements are used in environmental risk assessment and management. Students are presented with the basic elements of a quantitative risk assessment including hazard identification, exposure assessment, dose-response assessment, and risk characterization. Students are taught how municipal, state, federal and international agencies implement and assess the success of environmental policies, while taking into consideration the social and economic considerations in environmental management frameworks. Several examples from local, federal and international policies will be used to explore the assessment and management process.

Prerequisites: ENH 611 [Min Grade: C] and ENH 650 [Min Grade: C]

ENH 612Q. Assessing & Managing Environmental Risks Online. 3 Hours.
The purpose of this course is to provide students with an overview of environmental policy, with a focus on demonstrating how toxicology and exposure measurements are used in environmental risk assessment and management. Students are presented with the basic elements of a quantitative risk assessment including hazard identification, exposure assessment, dose-response assessment, and risk characterization. Students are taught how municipal, state, federal and international agencies implement and assess the success of environmental policies, while taking into consideration the social and economic considerations in environmental management frameworks. Several examples from local, federal and international policies will be used to explore the assessment and management process.

Prerequisites: ENH 611 [Min Grade: C] and ENH 650 [Min Grade: C]

ENH 621. Fund of Industrial Hygiene. 3 Hours.
Chemical, physical and other hazards and stresses found in the work environment. Recognizing potential hazards by understanding industrial processes, toxicity of environmental contaminants and occupational disease processes. Study design and preparation for field evaluation, conduct of industrial hygiene surveys, and interpretation of survey results.

ENH 621Q. Fundamentals of Industrial Hygiene Online. 3 Hours.
Chemical, physical and other hazards and stresses found in the work environment. Recognizing potential hazards by understanding industrial processes, toxicity of environmental contaminants, and occupational disease processes. Study design and preparation for field evaluation, conduct of industrial hygiene surveys, and interpretation of survey results.

ENH 622. Industrial Hygiene Applications for Hazardous Substances. 3 Hours.
This course covers industrial hygiene aspects of hazardous waste operations, and the regulatory aspects of those operations. Students will gain knowledge of the OSHA and EPA regulations related to health and safety issues and will learn about personal safety equipment and techniques, administrative controls, and hazardous waste sampling.

Prerequisites: ENH 621 [Min Grade: C]

Prerequisites: ENH 621 [Min Grade: C]

ENH 624. Control of Occupational Hazards. 2 Hours.
Importance of engineering controls in reducing occupational health hazards. Substitution of less toxic substances, modification of work processes, and design of local exhaust ventilation systems; proper selections and use of personal protective equipment, especially respirators, also considered.

ENH 625. Industrial Hygiene Case Studies. 2 Hours.
Integrates students' basic knowledge through consideration of real work-place situations. Step-by-Step analysis of case reports covering occupational health problems in representative industrial situations. Sequential presentation of overview of working conditions, survey strategies, interpretation of results, and recommendations.

Prerequisites: ENH 624 [Min Grade: C]

ENH 626. Physical Agents. 2 Hours.
Sources, effects, and control of occupational and environmental noise, ionizing and non-ionizing radiation, and temperature extremes. Review of exposure standards and introduction of measurement equipment and techniques.

ENH 630. Environmental Hygiene in Developing Countries. 3 Hours.
Environmental hygiene and health problems involving poverty and poor sanitation. History of the sanitation movement in western and northern hemispheres; programs aimed at control of diseases.

ENH 635Q. Foodborne and Waterborne Diseases: Causes and Prevention Online. 3 Hours.
This is a fully online course focusing on foodborne and waterborne diseases designed for public health students and others interested in the safety of food and water as essential elements for the public’s health. It provides a broad overview of the major foodborne and waterborne diseases. The course describes how information from surveillance is used to improve public health policy and practice in ways that contribute to the safety of our food and water.

ENH 636. Evolutionary Medicine. 3 Hours.
This course explores the relatively recent and rapidly expanding field of evolutionary or Darwinian medicine, which takes an evolutionary approach to issues related to human health and disease, i.e., a synthesis of evolution and health sciences. The course is designed as a broad overview of a number of topics, including infectious diseases and the arms race between pathogen and host, genetic diseases, aging, nutrition, cancer, reproducions and development, and behavioral and mental disorders. Preq: Permission of instructor is required.

ENH 648. Global Perspectives/Disease Prevention and Control. 6 Hours.
Known as the Summer Institute, this intensive summer course seeks to train academicians, students and public health practitioners in the principles of modern public health practice. The goals are for students to obtain disciplinary expertise in the prevention and control of tuberculosis, HIV/AIDS/STD’s and common chronic diseases in an international setting, enhance their knowledge base in public policy development and to build skills in applied epidemiology and biostatistics. NOTE: Students must be accepted via a special Sparkman Center coordinated application process and payment of fee.

ENH 649. Global Perspectives/Disease Prevention and Control. 6 Hours.
Known as the Summer Institute, This intensive summer course seeks to train academicians, students and public health practitioners in the principles of modern public health practice. The goals are for students to obtain disciplinary expertise in the prevention and control of tuberculosis, HIV/AIDS/STD’s and common chronic diseases in an international setting, enhance their knowledge base in public policy development and to build skills in applied epidemiology and biostatistics. NOTE: Students must be accepted via a special Sparkman Center coordinated application process and payment of fee.
ENH 650. Essentials of Environmental and Occupational Toxicology and Diseases. 3 Hours.
Serves as introductory graduate level course that focuses on multiple aspects of toxicology and disease processes associated with environmental and occupational exposures. Students learn basic terminology and concepts of environmental and occupational toxicology as well as occupational and environmental disease recognition, management and prevention. Emphasis is on scientific foundations rather than on addressing topical issues. The general course orientation is towards basic principles, organ system physiology, diseases and prevention. This is a designated service learning course.

ENH 650Q. Environmental and Occupational Toxicology and Diseases. 3 Hours.
Serves as introductory graduate level course that focuses on multiple aspects of toxicology and disease processes associated with environmental and occupational exposures. Students learn basic terminology and concepts of environmental and occupational toxicology as well as occupational and environmental disease recognition, management and prevention. Emphasis is on scientific foundations rather than on addressing topical issues. The general course orientation is towards basic principles, organ system physiology, diseases and prevention.

ENH 651. Risk Assessment of Environmental Hazards. 3 Hours.
Biochemical mechanisms, use of computers to attain toxicity information and preparation of health hazard assessments.
Prerequisites: ENH 650 [Min Grade: C]

ENH 660. Fundamentals of Air and Water Pollution. 3 Hours.
The course is an integrated introduction to air and water pollution, including its sources, transport and effects. The course focuses on the measurement and characterization of air pollutants and the assessment of water quality. Emphasis will also be given to the regulatory control of pollutants and to the technical aspects of engineering controls. The potential impact of air pollutants on the climate change will also be emphasized.

ENH 660Q. Fundamentals of Air and Water Pollution. 3 Hours.
An integrated introduction to air and water pollution, including its sources, transport, and effects. Focus will be on measurement and characterization of air pollution and the bio-assessment of water quality. Regulatory control of pollutants and the technical aspects of engineering controls will also be given emphasis.

ENH 661L. Environmental Sampling and Analysis Laboratory. 2 Hours.
This course is designed to provide the students with a thorough understanding of the principles and practice of air and water sampling. The course will focus on contaminant gases, vapors, suspended particulate material and dissolved chemicals in water. A basic understanding of chemistry and physics is prerequisite. Working professionals taking the online version of the MPH in Occupational Health & Safety track will not be required to participate in the lectures and laboratory exercises described in the syllabus of the course. However, slides with lecture commentary will be provided to the students and they will have to submit responses to the quizzes and homework assignments. This course is also offered online.

ENH 661Q. Environmental Sampling & Analysis Lab Online. 2 Hours.
This course is designed to provide the students with a thorough understanding of the principles and practice of air and water sampling. The course will focus on contaminant gases, vapors, suspended particulate material and dissolved chemicals in water. A basic understanding of chemistry and physics is prerequisite. Working professionals taking the online version of the MPH in Occupational Health & Safety track will not be required to participate in the lectures and laboratory exercises described in the syllabus of the course. However, slides with lecture commentary will be provided to the students and they will have to submit responses to the quizzes and homework assignments.

ENH 662. Air Sampling and Analysis Lab. 1 Hour.
Air sampling analysis lab.

ENH 670. Fund of Occupational Safety. 3 Hours.
Basic principles of safety and loss control; emphasis on prevention of losses of people, property, and products in the work place. Developing competence in human-factors engineering, fire prevention, physical and behavioral science, product safety, and science of accident prevention.
This course is only offered only.

ENH 670Q. Fund of Occupational Safety Online. 3 Hours.
Basic principles of safety and loss control; emphasis on prevention of losses of people, property, and products in the work place. Developing competence in human-factors engineering, fire prevention, physical and behavioral science, product safety, and science of accident prevention.

ENH 680. Field Interdisciplinary Studies. 1 Hour.
Field trips to industries throughout Alabama to observe processes and interact with other occupational health personnel. Seminars held with occupational health nursing, industrial hygiene, and safety and ergonomics students to exchange information on latest developments in each field.
Prerequisites: ENH 621 [Min Grade: C]

ENH 680Q. Interdisciplinary Field Studies Online. 1 Hour.
Field trips to industries throughout Alabama to observe processes and interact with other occupational health personnel. Seminars held with occupational health nursing, industrial hygiene, and safety and ergonomics students to exchange information on latest developments in each field.
Prerequisites: ENH 621 [Min Grade: C]

ENH 681. Interdisciplinary Worksite Evaluations. 2 Hours.
To assist students in developing critical thinking and analytical skills, provide them with experience in applying discipline-specific knowledge in a broad occupational health and safety context, and provide experience in working in interdisciplinary teams. The course consists of an overview of survey methodology and information sources, with emphasis on job safety analysis, a review of the occupational site or process to be evaluated and a report of the identified hazards and recommended controls. Prerequisites: ENH 680 [Min Grade: C]. This course is also offered online.
Prerequisites: ENH 680 [Min Grade: C]

ENH 681Q. Interdisciplinary Worksite Evaluation Online. 2 Hours.
To assist students in developing critical thinking and analytical skills, provide them with experience in applying discipline-specific knowledge in a broad occupational health and safety context, and provide experience in working in interdisciplinary teams. The course consists of an overview of survey methodology and information sources, with emphasis on job safety analysis, a review of the occupational site or process to be evaluated and a report of the identified hazards and recommended controls. Prerequisites: ENH 680 [Min Grade: C].
Prerequisites: ENH 680 [Min Grade: C]
ENH 691. Current Topics in Environmental Health and Occupational Health and Safety. 1 Hour.
Development of communication skills through objectively reviewing scientific literature; presentations and summaries of research or professional activities.

ENH 691Q. Current Topics in Environmental Health and Occupational Health and Safety Online. 1 Hour.
Development of communication skills through objectively reviewing scientific literature; presentations and summaries of research or professional activities.

ENH 695. Masters Level Seminar. 1 Hour.
Weekly seminar series of Environmental Health Sciences faculty, postdoctoral fellows, and invited guest lecturers. All PhD candidates in Environmental Health Sciences are required to attend all of the seminars.

ENH 697. Internship. 3 Hours.
Field experience under joint direction of a public health faculty member and qualified specialist working in selected aspects of public health.
Prerequisites: BST 601 [Min Grade: C] and ENH 611 [Min Grade: C] and EPI 600 [Min Grade: C] and HB 600 [Min Grade: C] and HCO 600 [Min Grade: C]

ENH 697Q. Internship Online. 3 Hours.
Field experience under joint direction of a public health faculty member and qualified specialist working in selected aspects of public health.
Prerequisites: BST 601 [Min Grade: C] or and ENH 611 [Min Grade: C] and EPI 600 [Min Grade: C] and HB 600 [Min Grade: C] and HCO 600 [Min Grade: C].

ENH 698. Masters Directed Research. 1-9 Hour.
Independent study with guidance of appropriate faculty.

Research for project under direction of research project committee.

ENH 700. Scientific Basis of Environmental Health. 3 Hours.
This is an overview course that is intended to provide doctoral students with a broad understanding of the scientific principles on which environmental health is based within the context of the interaction of human activities and ecosystems, and the reciprocal impact of those interactions on human health and global ecology.

ENH 701. Environmental Chemistry. 3 Hours.
The course will describe the underlying physicochemical and mathematical formulations governing environmental physico-chemical processes including the coupling with biological media. Specific attention will be paid in understanding the physical basis of the processes and critical variables rather than memorizing the mathematical equations. The kinetics and thermodynamics of chemical transformations including redox and photolysis reactions will be introduced. Subsequently, specific environmental cases involving aquatic and atmospheric environments will be thorough investigated. Students should have undergraduate organic chemistry and thermodynamics; mathematical calculations are a significant component of this course.

ENH 702. Advanced Topics in Environmental Management. 3 Hours.
This course extends the grounding of students in environmental management concepts, issues, and strategies with new course material on ecosystem management, ecological risk assessments (using case studies for assessments under TSCA, FIFRA, Non-indigenous species and CERCLA) and frameworks for integrating science and preventive public policy, such as the precautionary assessment framework.
Prerequisites: ENH 612 [Min Grade: C] NOTE: If course prerequisite of ENH 612 of is not met, permission of instructor is required.

ENH 705. Special Topics in Environmental and Occupational Health Occupational Hygiene Research - Journal Club. 1 Hour.
This course is designed to provide advanced (doctoral) students in Environmental Health Sciences in general, and Industrial hygiene in particular an overview of the research literature and introduction in advance topics such as nanomaterials, control banding, quantitative occupational exposure assessment, etc. Students will have the opportunity to present their own research, learn about the research conducted by their peers and conduct critical review of published research.

ENH 706. Mitochondria Hlth, Disease,Tox. 3 Hours.
Requrement This course is designed for doctoral students admitted to campus-wide PhD programs in the biomedical, basic, and public health sciences, post-doctoral fellows, medical students, residents, staff and members of the faculty interested in mitochondrial biology. Students outside the School of Public Health and Joint Health Science Doctoal Training PRograms must contact the course Director before enrolling in the course to see if slots are still available. Prerequisite: Successful completion of doctoral level biochemistry/molecular biology course Description:The course will consist of didactic lectures by faculty members on a specific topic in the field of mitochondria biology and toxicology. These lectures will be complemented by student presentations of original research article, which are related to the presented subject matter and that place the discussed topic into the context of human health, disease, and toxicology. This format will allow for students to gain a solid understanding of normal mitochondria physiology, which they can then use to explore the literature to reveal the importance of mitochondria dysfunction in human diseases and toxicology responses. This course will be guided by the course Director and other faculty members who will assist in the selection of relevant readings and facilitate in-class discussions among the students.

ENH 710. Grant Proposal Writing in Biomedical Sciences. 1 Hour.
This course will train second-year graduate students in the intricacies of writing research proposals in the biomedical sciences.

ENH 720. Integrated Biomedical Science for Environmental Health I. 10 Hours.
The purpose of this course is to provide students with a rigorous background in the principles of biological chemistry and cellular physiology. Students should master and include the application of these principles to research protocols and performance. The knowledge acquired can then be applied to organ-system physiology, pathophysiology, pharmacology, and genomics in ENH 721 and ENH 722. (Course is scheduled with IBS 700).
ENH 721. Integrated Biomedical Science for Environmental Health II. 8 Hours.
The purpose of this course is to integrate the anatomic, physiologic, pathophysiologic and pharmacologic principles of molecular, cellular, whole tissue and organ physiology. The material mastered in this course builds upon the basic principles learned in ENH 720 and will facilitate understanding in genetic-based disorders and genetically generated animal models of disease provided in ENH 722. (Course is scheduled with IBS 701).

ENH 722. Integrated Biomedical Science for Environmental Health III. 3 Hours.
The purpose of this course is to integrate the anatomic, physiologic, pathophysiologic and pharmacologic principles of molecular, cellular, whole tissue and organ biology. The material mastered in this course builds upon the principles learned in ENH 721 and will facilitate understanding in genetic-based disorders and genetically generated animal models of disease provided in this course. (Course is scheduled with IBS 702).

ENH 752. Biochemical and Molecular Toxicology. 3 Hours.
This advanced course serves to equip students to understand at the molecular and cellular levels how environmental and occupational agents exert their toxic properties against specific genetic backgrounds. This course assumes a strong foundational knowledge of cell biology, RNA and DNA metabolism, and gene function, structure and regulation. This course will prepare students to apply advanced toxicology principles to agents of disease in order to understand the molecular mechanism and where interventions may be appropriate. Prerequisite: Admission into a public health or biomedical PhD program or permission of the instructor.

ENH 763. Aerosol Technology. 3 Hours.
Defines properties and behavior of aerosols from industrial hygiene and environmental perspectives. Reviews fundamental particle descriptions and critical fluid properties affecting particle behavior. Methods of defining particle size and particle behavior. Methods of defining particle size and size distribution and theories of particle kinetics and their application to particle disposition and collection. This multidisciplinary course covers the fundamental principles that govern the formation, growth, measurement and modeling of particles behavior (both ambient and nanoparticles) with direct application to health sciences and engineering specialties. The course explores the quantitative evaluation of aerosol behavior including the physical and chemical parameters that govern it. Specific applications of atmospheric and occupational aerosol, bioaerosol and nanoparticles are included to link fundamental knowledge to practical implications in industrial hygiene, national security and materials technology. Prerequisites: ENH 661 [Min Grade: C]

ENH 770. Advanced Topics in Environmental Disasters in PUH. 3 Hours.
Examines emerging public health challenges posed by incidents involving chemicals, radiation and biological agents. Students are provided with the opportunity to undertake guided research on current topics in the field and discuss their findings with graduate students and faculty members. Course will be graded by letter. Prerequisites: ENH 610 [Min Grade: C] NOTE: If course prerequisite of ENH 610 is not met, permission of instructor is required. Prerequisites: ENH 610 [Min Grade: C]

ENH 780. Seminars in Free Radical Biology and Medicine. 1 Hour.
This course will consist of research seminars presented primarily by leading national and international scientists working in free radical biology and medicine. These seminars are interactive with questions being asked throughout the presentation. Prerequisite: Requires permission of instructor.

ENH 781. Journal Club: Mechanisms of Redox Cell Signaling & Disease. 1 Hour.
This course will consist primarily of student presentations of peer-reviewed journal articles and of their research projects. The overall objective of this course is for the student to develop critical thinking skills in the analysis of published research in an area related to their own dissertation research. This course will be graded as Pass/Fail. Prerequisite: Permission of instructor required.

ENH 782. Free Radical Chem & Biochem. 2 Hours.
This course is for students to gain expertise in the chemical and biochemical reactions of free radicals as they occur in biological systems. Students should be able to critically evaluate the literature with respect to free radical chemistry principles in the experimental design for their own dissertation research. Course will be graded by letter. Prerequisite: Completion of first year IBS or CMB or permission of instructor.

ENH 783. Free Radical in Health & Disea. 2 Hours.
This course is for students to understand the roles that free radicals play in biological systems both in the maintenance of normal physiology via regulated cell signaling and in contributing to pathology through loss of this regulation. Students should be able to critically evaluate the literature with respect to the roles of free radicals in health and understanding into their own dissertation research. Course will be graded by letter. Prerequisite: Completion of ENH 721 or ENH 722. Prerequisite: Permission of instructor required.

ENH 790. Seminar: Current Topics in ENH Sciences Research. 1 Hour.
Interactive forum in which graduate students and faculty discuss dissertation research projects and topics related to the field of Environmental Health Sciences Research through presentation of journal articles. Course is designed to develop oral communication skills for presenting scientific material to peer groups. Presentations by graduate students are followed by discussion and questions. Prerequisite: Permission of instructor required.

ENH 791. Advanced Environmental Health and Toxicology Seminar. 1 Hour.
Facilitates critical review of recent refereed publications in toxicology and presentations of research data. Students exposed to advanced knowledge and diversified subjects. Prerequisite: ENH 650, ENH 651 or ENH 750 or permission of instructor. Prerequisites: ENH 650 [Min Grade: C] and ENH 651 [Min Grade: C] or ENH 750 [Min Grade: C]

ENH 793. DrPH Practicum. 6 Hours.
Field experience course that bridges professional academic preparation and advanced public health practice. A final grade for the course will be awarded by the faculty practicum advisor and based upon the practicum mentor/supervisor’s evaluation and the student’s final product. Prerequisites: ENH 650, ENH 651, ENH 750 or permission of instructor

ENH 796. Environmental Toxicology Laboratory Rotations. 3 Hours.
Doctoral laboratory rotations in Environmental Health Sciences. Required for First and Second year PhD students in the Industrial Hygiene and Environmental Management and Policy foci. Prerequisite: Permission of instructor required.

ENH 798. Doctoral Level Directed Res. 1-9 Hour.
Independent study with guidance of appropriate faculty. Prerequisite: ENH 650, ENH 651, ENH 750 or permission of instructor

Research for dissertation under the direction of the dissertation committee. Prerequisite: Must be admitted to candidacy before registering for this course. Prerequisites: GAC D
EPI-Epidemiology Courses

EPI 600. Intro to Epidemiology. 3 Hours.
Principles of epidemiologic thinking. Measures of disease frequency and association. Determinants of disease and distribution of factors influencing health and disease in populations. Epidemiology of disease of public health importance today. This course is a CORE requirement for non-Epidemiology MPH majors.

EPI 600Q. Introduction to Epidemiology Online. 3 Hours.
Principles of epidemiologic thinking. Measures of disease frequency and association. Determinants of disease and distribution of factors influencing health and disease in populations. Epidemiology of disease of public health importance today. This course is a CORE requirement for non-Epidemiology MPH majors.

EPI 602. Epidemiology of Chronic Diseases. 4 Hours.
Application of epidemiologic principles to consideration of cancer, cardiovascular diseases, other chronic diseases. Emphasis on classification, rates, association, etiology, prevention, and control. Pertinent literature critically reviewed.
Prerequisites: EPI 610 [Min Grade: C]

EPI 602Q. The Epidemiology of Chronic Diseases Online. 4 Hours.
This course will explore the breadth and depth of the epidemiology of chronic diseases including classification, surveillance, frequency, distribution, etiology, natural history, risk factors, and control. It will address details of large-scale epidemiologic studies in cardiovascular diseases and cancer, and will discuss epidemiologic papers relating to the use of various study designs.

EPI 603. Injury-Epidemiologic Principles and Prevention Strategies. 3 Hours.
Concepts and methods of epidemiology applied to injury; epidemiology of major injury types, utilization of injury data sets; development and evaluation techniques of preventive strategies. EPI 600 or EPI 610 recommended prerequisite.
Prerequisites: EPI 600 [Min Grade: C] or EPI 610 [Min Grade: C]

EPI 604. Infectious Disease Surveillance and Control: Field Studies in Developing Countries. 3 Hours.
The primary focus of the course is vector ecology and biology, infectious disease surveillance and control, and water and sanitation in a developing country, with an emphasis on field and community-based learning. This class will take place in Jamaica and you must be accepted by the Sparkman Center for Global Health.

EPI 605. Epidemiology of Infectious Disease. 4 Hours.
Introduction to basic principles of infectious disease epidemiology, surveillance, and control. This course will also include critical analysis of the magnitude, distribution, risk factors, and public health significance of selected infectious diseases in community and institutional settings. While the primary geographic focus is the U.S., international comparisons and perspectives will be included. Primary attention is neither on research methods nor on clinical and pathologic aspects of disease. 1 semester in PH master’s program & biology background.
Prerequisites: EPI 600 [Min Grade: C] or EPI 610 [Min Grade: C]

EPI 605Q. Epidemiology of Infectious Disease Online. 4 Hours.
This class provides an introduction to epidemiological concepts pertaining to various infectious diseases. Students will gain familiarity with epidemiologic characteristics of various infectious conditions significant in the United States and the world. Practical exercises, discussions will help in approaching “real world” problems.

EPI 607. Fundamentals of Clinical Research. 3 Hours.
This course will provide an overview of principles and practices related to the study of determinants and outcomes of medical interventions. Methods for conducting epidemiologic research in the "clinic", assessing the validity of diagnostic and screening tests, measuring therapeutic efficacy and safety, and describing the natural history of disease will be reviewed. NOTE: Introductory training in epidemiology (e.g., EPI 600 or EPI 610) is recommended but not required; or permission of Instructor.

EPI 607Q. Fundamentals of Clinical Research Online. 3 Hours.
This course will provide an overview of principles and practices related to the study of determinants and outcomes of medical interventions. Methods for conducting epidemiologic research in the "clinic", assessing the validity of diagnostic and screening tests, measuring therapeutic efficacy and safety, and describing the natural history of disease will be reviewed. NOTE: Introductory training in epidemiology (e.g., EPI 600 or EPI 610) is recommended but not required; or permission of Instructor.

EPI 609. Pharmacoepidemiology and Comparative Effectiveness Research. 3 Hours.
This course will provide an overview of epidemiologic methods applied to the study of utilization and safety of drugs in large numbers of individuals and an overview of issues and methods used in comparative effectiveness research on drugs, other medical interventions and medical care delivery. Note: EPI 610, BST 601 or BST 611 are recommended but not required.
Prerequisites: EPI 610 [Min Grade: C] and EPI 610L [Min Grade: C] and BST 612 [Min Grade: C]

EPI 610. Principles of Epidemiologic Research. 4 Hours.
Concepts and methods of epidemiology. Measures of disease frequency, study design and analysis, indices of disease and health; overview of major categories of acute and chronic disease, analysis of the epidemiologic data sets. Core requirement for Epidemiology majors.

EPI 610L. Principles of Epidemiologic Research - LAB. 0 Hours.
Principles of Epidemiologic Research lab.

EPI 610Q. Principles of Epidemiologic Research Online. 4 Hours.
Concepts and methods of epidemiology. Measures of disease frequency, study design and analysis, indices of disease and health; overview of major categories of acute and chronic disease, analysis of the epidemiologic data sets. Core requirement for Epidemiology majors.

EPI 611. Data Management of Epidemiologic and Clinical Study. 4 Hours.
Epidemiology is a combination of a subject matter science and research methodology. EPI 611 focuses on the latter component. The course extends knowledge of study designs introduced in EPI 610 as applied to human populations, including randomized trials and four types of observational studies (cohort, case-control, cross-sectional, ecological). Since cause-and- effect relations are at the heart of epidemiologic research, numerous related topics are taught in EPI 611 including causal inference, bias, and effect modification. Descriptive data analysis methods are integrated within each type of design. Preq: EPI 610.
Prerequisites: EPI 610 [Min Grade: C]

EPI 611L. Epidemiology Design and Analysis Lab. 0 Hours.
EPI 611 course and lab will focus on the research methodology for designing, implementing, analyzing and interpreting epidemiologic studies including randomized clinical trials and observational studies (case-control, cohort and cross-sectional).
EPI 614. Epidemiologic Methods Applied to Comparative Effectiveness Research. 2 Hours.
This course will focus on methodological issues pertaining to the design, analysis, and interpretation of comparative effectiveness research studies. Special focus will be placed on comparative effectiveness research studies using a non-experimental design and large data base analyses.
Prerequisites: EPI 610 [Min Grade: C] and BST 611 [Min Grade: C] and BST 612 [Min Grade: C]

EPI 616. Environmental Epidemiology. 3 Hours.
Design and conduct of studies examining health effects of environmental exposures. Strengths and limitations of research strategies and interpretation of study results. Areas of interest include air and water pollution, lead, and biological marker outcomes.
Prerequisites: EPI 600 [Min Grade: C] or EPI 610 [Min Grade: C]

EPI 618. Fieldwork in Public Health. 2 Hours.
Application of public health principles in communicable disease control and environmental health programs carried out at Jefferson County Department of Health.
Prerequisites: EPI 605 [Min Grade: C] and EPI 610 [Min Grade: C]

EPI 621. HIV/AIDS and STDs. 3 Hours.
Basic biology and pathogenesis, historical and current trends, domestic and international epidemiology, determinants of spread, immunogenetics and host susceptibility, options for prevention, surveillance and control of sexually transmitted diseases (STD’s) and HIV/AIDS. If not Public Health student permission of instructor is required.

EPI 623. Intro SAS Software. 1 Hour.
The Introduction to SAS Software course will run for seven two-hour sessions. The first hour will be dedicated to lectures that will include writing and running SAS codes by the instructor. In the second hour, students are expected to perform a series of tasks in class.

EPI 625. Quantitative Methods in Epidemiology. 3 Hours.
An introduction to multivariate techniques and survival analysis as they pertain to epidemiologic data and critical reading of corresponding literature, specifically, logistic regression, log-linear modeling, Poisson regression, life tables, Kaplan-Meier survival curves, and Cox proportional hazards modeling.
Prerequisites: EPI 610 [Min Grade: C] and EPI 626 [Min Grade: C]

EPI 625Q. Quantitative Methods in Epidemiology Online. 3 Hours.
An introduction to multivariate techniques and survival analysis as they pertain to epidemiologic data and critical reading of corresponding literature, specifically, logistic regression, log-linear modeling, Poisson regression, life tables, Kaplan-Meier survival curves, and Cox proportional hazards modeling.
Prerequisites: EPI 610 [Min Grade: C] and EPI 626 [Min Grade: C]

EPI 626. Introduction to Data Analysis with SAS. 2 Hours.
The general content will be basic SAS programming focused on fundamental statistical procedures. Upon completion of the course, the student should be able to do simple analysis and programming when given a SAS data set, and complete exercises from more advanced classes in epidemiology and biostatistics. Permission of instructor if not Public Health major.

EPI 626Q. Introduction to Data Analysis with SAS Online. 2 Hours.
The general content will be basic SAS programming focused on fundamental statistical procedures. Upon completion of the course, the student should be able to do simple analysis and programming when given a SAS data set, and complete exercises from more advanced classes in epidemiology and biostatistics. Permission of instructor if not Public Health major.

EPI 627. Data Analysis and Presentation of Epidemiologic Studies. 3 Hours.
Analyze data from an epidemiologic study, addressing a specific questions, and prepare a manuscript from the analysis. There are 3 possibilities regarding choice of data: 1) from a list of the instructor's datasets, 2) public use data, 3) from the student's research. Students working on an MSPH or another degree project may use data for that degree-project with approval of their advisor and course master. Upon completion of the course, the student should be able to analyze data from an epidemiologic study and prepare a manuscript.
Prerequisites: BST 611 [Min Grade: C] and BST 612 [Min Grade: C] and EPI 610 [Min Grade: C] and EPI 625 [Min Grade: C] and (BST 626 [Min Grade: C] or EPI 626 [Min Grade: C])

EPI 627Q. Data Analysis and Presentation of EPI Studies Online. 3 Hours.
This course is designed for students who wish to increase their experience with the statistical analysis of data from epidemiologic studies. Students will also gain experience interpreting the results of those statistical analyses in the context of a scientific publication. Prior experience with epidemiologic study design and statistical analysis is required.
Prerequisites: BST 611 [Min Grade: C] and BST 612 [Min Grade: C] and EPI 610 [Min Grade: C] and EPI 626 [Min Grade: C]

EPI 635. Genetics in Public Health. 2 Hours.
This course will provide a topical overview of issues in public health genetics. The purpose of this course is to introduce students to the complex issues involved in applying and integrating genetic technology and information into public health.

EPI 640. Cancer Epidemiology. 2 Hours.
This course will address methodologic and substantive issues in cancer epidemiology. The content will include definition, biological origins and pathological and clinical aspects of cancer; an introduction to information sources and methods in cancer epidemiology; the global burden of cancer; descriptive epidemiology and major risk factors for various forms of cancer; strategies for cancer prevention and the role of epidemiology in developing and evaluating those strategies. NOTE: Non-Degree students and interested students in other programs and schools are required to get instructors permission before attempting to register.
Prerequisites: EPI 600 [Min Grade: C] or EPI 610 [Min Grade: C]

EPI 680. Topics in Clinical Research. 2 Hours.
Provide health sciences professionals interested in clinical trials, clinical epidemiology, and other forms of population research with both essential principles and specific technical knowledge in a variety of areas relevant to the conduct of biological and behavioral investigation of human subjects. NOTE: Limited to health professionals planning clinical research careers who have been accepted into the MSPH in Clinical Research. This course begins in the Spring term and extends into the Summer term. Registration for this course is during the Summer semester. Please contact the Program Coordinator for the course syllabus and course schedule.
EPI 681. Special Topics in Epidemiology Research. 3 Hours.
To engage infectious disease research practice encompassing design, conduct, analysis, and interpretation. Students participate in supervised research and/or in research design. Doctoral students are expected to engage in supervised research. NOTE: Permission of instructor.
Prerequisites: EPI 605 [Min Grade: C]

EPI 682. Gorgas Course in Tropical Med. 3-9 Hours.
Hands-on exposure to tropical diseases and emerging pathogens in various teaching formats: didactic lectures, roundtables, laboratory work, clinical and hospital rounds, case conferences, computer training, field fied trips and independent study. Course is held in during the Spring Term in in Lima, Peru. NOTE: 9 hours (3 or Course can be taken for 3, 6 hours are also accepted with or 9 hours; however, evaluation will be restricted to selected sections of the course). course. Spring (Freedman).

EPI 695. Epidemiology Seminar. 1 Hour.
The purpose of the epidemiology seminar series is to provide a venue for faculty and students of epidemiology to participate in the presentation of a variety of topics and concepts related to the field of epidemiology, biostatistics and public health.

EPI 696. Masters Epidemiology Seminar. 3 Hours.
Critical evaluation of selected epidemiologic papers from published literature. Consideration of composition, study design, and validity of analysis. Editorial review and disposition of manuscripts.
Prerequisites: EPI 610 [Min Grade: C] and EPI 610L [Min Grade: C] and EPI 611 [Min Grade: C]

EPI 697. Internship. 3 Hours.
Field experience under joint direction of appropriate public health faculty member and qualified specialists working in selected aspects of public health.
Prerequisites: BST 600 [Min Grade: C] or (BST 611 [Min Grade: C] and BST 612 [Min Grade: C]) and ENH 600 [Min Grade: C] and EPI 600 [Min Grade: C] and EPI 610 [Min Grade: C] and EPI 611 [Min Grade: C] and HB 600 [Min Grade: C] and HC 600 [Min Grade: C]

EPI 697Q. Internship Online. 3 Hours.
The internship provides an opportunity for each student to work in a public health setting in a position that carries responsibility and is of particular interest. Each placement is different, but all depend upon completion of most coursework, the ability to work with minimal supervision, and acquiring permission of the student’s SOPH advisor and on-site preceptor/supervisor.

EPI 698. Master’s Level Directed Research Epidemiology. 1-9 Hour.
Independent study with guidance of appropriate public health faculty.

Research for project under direction of research committee.

EPI 703. Special Topics in the Epidemiology of Chronic Disease. 3 Hours.
To provide the student with information about grant writing and practice in preparing a grant proposal for submission. The proposal must relate to an epidemiologic topic. Human subjects issues are discussed. NOTE: Must be a doctoral student or obtain permission of instructor to enroll.

EPI 704. Advanced Epidemiologic Methods. 3 Hours.
This course provides an advanced introduction to fundamental epidemiologic concepts and methods, including causal inference, bias, and study design. This course is the first course in the sequence of the three required core epidemiology courses for doctoral students in epidemiology.

EPI 706. The Epidemiology of Cardiovascular Disease. 2 Hours.
The purpose of this course is to provide exposure to the epidemiology of cardiovascular disease.

EPI 710. Analysis of Case Control Studies. 3 Hours.
This course is designed to provide doctoral students in epidemiology with practical experience in the analysis and interpretation of data from case-control studies. Specific aims are: To outline a strategy for data analysis and review relevant methodologic issues and to apply stratified analysis methods and regression models in the study of diseases of multifactorial etiology. Preq: Requires permission of instructor.

EPI 712. Nutritional Epidemiology. 3 Hours.
Nutritional epidemiology will cover core concepts in human nutrition including nutrient classification, nutrient sources, nutritional deficiencies, nutritional excesses, recommended daily allowances, basic OMT data, dietary assessment methods in free-living populations, validation of dietary assessment methods, identification of biomarkers of dietary intake, study designs used in nutritional epidemiology, issues in the analysis and presentation of dietary data, diet-disease associations, gene-diet associations and special topics in nutrition (e.g., folic acid and neural tube defects, fatty acids and the metabolic syndrome, diet and obesity, vitamin A and immune function, vitamins and mother-to-child transmission of HIV, etc).

EPI 713. Cancer Epidemiology and Control. 3 Hours.
In this course students will learn what is known about the causes of cancer and the control measures used to decrease cancer incidence, decrease cancer mortality, extend cancer survival, and improve quality of life for cancer patients.

EPI 720. Analysis of Follow-Up Studies. 3 Hours.
This course is designed to provide doctoral students in epidemiology with practical experience in the analysis and interpretation of data from follow-up studies. Specific aims are: to outline a strategy for data analysis and review relevant methodologic issues and to apply stratified analysis methods and regression models in the study of diseases of multifactorial etiology.
Prerequisites: EPI 710 [Min Grade: C]

EPI 721. HIV/AIDS and STDs. 3 Hours.
The course will cover the epidemiology, prevention and control of Sexually Transmitted Diseases (STDs) including the human immune deficiency virus (HIV) infection in both the domestic and international settings. EPI 621 is intended as an elective for second year students and students who have a graduate degree in the Medical Health Professions who are enrolled in any degree track in the School of Public Health. It is considered an elective for the MPH and MSPH programs in Epidemiology. EPI 721 is intended only for doctoral students in the School of Public Health.

EPI 731. Genetic Epidemiology. 4 Hours.
This course will cover core concepts of designs, methods and statistical tools in genetic epidemiology studies for determining the contribution of genes to disease risk. Methods for incorporating genetic markers into conventional epidemiologic study designs as risk factors including genetic risk models, familial correlations, migration and admixture, quantitative and qualitative traits, association and linkage analyses in family based designs, allele/haplotype frequency estimation, Hardy Weinberg Equilibrium and linkage disequilibrium and application in both family and population based studies will be discussed. Methods for gene-gene and gene-environment interaction assessment, genome wide association studies are also presented. Students not meeting the prerequisites must get permission from the instructor.
Prerequisites: (EPI 600 [Min Grade: C] or EPI 610 [Min Grade: C]) and (BST 601 [Min Grade: C] or BST 611 [Min Grade: C] or BST 621 [Min Grade: C])
EPI 731L. Genetic Epidemiology Lab. 0 Hours.
EPI 731 course and lab will cover core concepts of design, methods and statistical tools in genetic epidemiology studies for determining the contribution of genes to disease risk.

EPI 781. Special Topics in Epidemiology Research. 3 Hours.
To engage infectious disease research practice, encompassing design, conduct, analysis, and interpretation. Students participate in supervised research and/or in research design. NOTE: Doctoral students are expected to engage in supervised research and must obtain permission of instructor.

Prerequisites: EPI 605 [Min Grade: C]

EPI 788. Principles and Methods in Molecular Epidemiology. 4 Hours.
Molecular biology and its relevance to the epidemiology, etiology and natural history of human diseases. The course will develop knowledge and skills in molecular biology, genetics and epidemiology methods, and facilitate the application of this information to evaluate susceptibility, etiology, natural history, treatment, and prevention of diseases. 4 hours (Brown).

EPI 790. Doctoral Seminar in Epidemiology. 2 Hours.
In depth study of several areas of epidemiologic methodology not covered in other courses. Students responsible for selecting and presenting topics. Considerable reading and outside preparation required. NOTE: Requires permission of instructor.

EPI 793. DrPH Practicum. 6 Hours.
Field experience course that bridges professional academic preparation and advanced public health practice. A final grade for the course will be awarded by the faculty practicum advisor and based upon the practicum mentor/supervisor's evaluation and the student's final product.

EPI 795. Epidemiology Seminar. 1 Hour.
The purpose of the epidemiology seminar series is to provide a venue for faculty and students of epidemiology to participate in the presentation of a variety of topics and concepts related to the field of epidemiology, biostatistics and public health.

EPI 797. Analysis and Presentation of Epidemiologic Data. 2 Hours.
To gain experience with the analysis, interpretation, and presentation of epidemiologic data by successfully analyzing a data set and presenting the results in the form of a publication quality manuscript. NOTE: Restricted to PhD students in Epidemiology. Permission of instructor.

EPI 798. Doctoral Level Directed Research Epidemiology. 1-9 Hour.
Independent study with guidance of appropriate faculty.

Research for dissertation under direction of dissertation committee.

Prerequisites: GAC D

GHS 600. Fundamentals of Global Health. 3 Hours.
This course is one of three intergrated core courses in the UAB Certificate in Global Health designed to introduce students to the foundations of global health programs, policies and practices.

GHS 604. Infectious Diseases of Global Health Significance. 3 Hours.
The purpose of this course is to equip participants with up-to-date knowledge on major infections of global importance, and prevention and control strategies so that infections and large disease outbreaks can be prevented and/or easily contained.
GHS 617. Global Health: Principles & Practice. 3 Hours.
This course introduces students to the world’s vast diversity of determinants of good- and ill-health. It examines major global health policies, and stimulates students to analyze health problems, prevention, early detection, and treatment priorities in different nations. The course provides an opportunity to analyze the role of national and international development agencies and NGOs in global health policy and practice and to critically appraise health care delivery systems in different parts of the world. Current and emerging global health priorities are analyzed. New health challenges brought about by globalization, environmental changes, and economic development are discussed.

This course will explore in depth the causality of major diseases in underdeveloped and developing nations and the creation of health care systems and social policies to counteract them. This course will also focus on the interventions targeting the UN’s Millennium Development Goals as they pass the halfway point to achieve them.

GHS 620. Infect Dis Surveillance & Contr. 3 Hours.
The primary focus of the course is vector ecology and biology, infectious disease surveillance and control, and water and sanitation in a developing country, with an emphasis on field and community-based learning. This class will take place in Jamaica and you must be accepted by the Sparkman Center for Global Health.

GHS 629. Intensive Global Health Training - SIFAT. 3 Hours.
Become a better Global Citizen by learning critical issues on Household Energy use in the developing world that affect health, environmental sustainability, gender equity, economics, and the development of millions of families and communities globally. Learn what you can do to make a difference. Be a part of the solution for a better world.

GHS 630. Field Training in World Hunger and Malnutrition: Practical Skills to Make a Difference. 3-6 Hours.
This two week intensive field training course will take place at SIFAT’s 176-acre international training campus in Lineville, AL. Students will attend didactic sessions and participate in hands on activities and simulations. SIFAT trainers are experienced in international development and cross-cultural dynamics. On-site Field Training.

GHS 640. Social Responsibility in Global Health. 1 Hour.
This course provides students with an understanding of key social and economic concepts of global health that, together with an understanding of interprofessional collaboration and community partnerships, will enable them to participate in developing and implementing sustainable global health projects in collaboration with local and international community partners. The course is open to undergraduate and graduate students who are enrolled in two co-requisite courses that are requirements for students participating in the global health service learning program at the University of Alabama at Birmingham.

GHS 641. Interprofessional Collaboration (IPC) and Community Partnerships in Global Health. 1 Hour.
This course provides students with an understanding of principles of interprofessional collaboration and community partnerships that, together with key social and economic concepts of global health, enables them to participate in developing and implementing sustainable global health projects in collaboration with local and international community partners.

GHS 642. Interprofessional Global Health Service Learning I: Project Planning. 1 Hour.
This course provides students with an opportunity to apply principles of interprofessional collaboration, community partnerships, and global health in the development of a plan to address a global health problem in collaboration with a community partner. The course is open to undergraduate and graduate students who are enrolled in two co-requisite courses that are requirements for students participating in the global health service learning program at the University of Alabama at Birmingham.

GHS 643. IGHSL2 Project Implementation. 3 Hours.
This course provides students with an opportunity to work in interdisciplinary teams of 3-8 members (minimum of 2 disciplines) and in collaboration with a community partner; the groups will apply principles of interprofessional collaboration, community partnership, and concepts and theories of global health in the implementation of a plan for a service project (developed in GHS 642) that addresses a specific global health problem identified by the community.

Prerequisites: GHS 642 [Min Grade: C]

GHS 649. Interprofessional Global Health Service Learning. 3 Hours.
This course provides students with an opportunity to work in small teams to address a global health problem in collaboration with a community partner. The global health problem to be addressed can be at a local site (with a local agency or partner), a site within the US, or an international site (with a US or non-domestic agency or partner). Interprofessional teams of 4-6 graduate and professional students will apply concepts and theories related to global health, interprofessional collaboration, team building, leadership, community partnerships, business models, and appropriate framework for developing and implementing a plan to address a specific global health problem with a community partner.

HB-Health Behavior Courses

HB 600. Social and Behavioral Science Core. 3 Hours.
This course is structured to provide students with a basic "starting point" for developing the required competencies in this area. The course consists of information delivery (e.g., lectures, readings), practice and application exercises, and knowledge integration and synthesis activities. Successful completion of this course will enable you to describe the role of social and community factors in both the onset and solution of public health problems; identify the causes of social and behavioral factors that affect health of individuals and populations; identify basic theories, concepts and models; apply ethical principles to public health program planning, implementation and evaluation; specify multiple targets and levels of intervention; identify individual, organizational and community concerns, assets, resources and deficits; apply evidence-based approaches in the development and evaluation of interventions; describe the merits of social and behavioral science interventions and policies; describe steps and procedures for the planning, implementation and evaluation of public health programs; and identify critical stakeholders for the planning, implementation and evaluation of public health programs, policies and interventions. Course will be graded by letter. 3 hours.
HB 600Q. Social and Behavioral Sciences in Public Health Online. 3 Hours.
This course is structured to provide students with a basic “starting point” for developing the required competencies in this area. The course consists of information delivery (e.g., lectures, readings), practice and application exercises, and knowledge integration and synthesis activities. Successful completion of this course will enable you to describe the role of social and community factors in both the onset and solution of public health problems; identify the causes of social and behavioral factors that affect health of individuals and populations; identify basic theories, concepts and models; apply ethical principles to public health program planning, implementation and evaluation; specify multiple targets and levels of intervention; identify individual, organizational and community concerns, assets, resources and deficits; apply evidence-based approaches in the development and evaluation of interventions; describe the merits of social and behavioral science interventions and policies; describe steps and procedures for the planning, implementation and evaluation of public health programs; and identify critical stakeholders for the planning, implementation and evaluation of public health programs, policies and interventions. Course will be graded by letter. 3 hours.

HB 602. Alcohol and Drug Abuse. 3 Hours.
History and theory of human substance use and abuse. Empirical foundations of alcohol and drug abuse, diagnosis, assessment, treatment, and prevention. Course will be graded by letter. 3 hours.

HB 603. Obesity Prevention & Intervention. 3 Hours.
The aim of this course is to provide students with theoretical and practical knowledge required to develop, implement, and evaluate obesity intervention and prevention programs. The course covers both pediatric and adult obesity intervention and prevention with a focus on lifestyle (dietary intake, physical activity) and environmental factors. Course will be graded by letter. 3 hours.

HB 604. High Technology Approaches to Health Communications and Behavior Change Interventions. 3 Hours.
To present students with an initial, in-depth exposure to concepts, technical skills and research findings associated with the integration of computer technology and health communications.

HB 605. Physical Activity in Public Health. 3 Hours.
This seminar course is an introduction to research and practice related to physical activity promotion from a public health perspective and will describe health benefits, epidemiological data, national recommendations and plans, and global initiatives related to physical activity. Course will be graded by letter. 3 hours.

HB 606. Food Systems and Policies. 4 Hours.
This course will introduce students to elements of food systems and the implications of public policies around food.

HB 606Q. HCO 606 MCH Fundaments II: Application of Essential MCH Skills Online. 3 Hours.
This course is taught entirely in online format, with sessions occurring two times per week for 1 hour and 15 minutes per session. Course sessions will entail a combination of lectures, group discussions via course discussion board, small-group activities, and student presentations based on assigned readings and projects. Active student participation in all class discussions and presentations is essential. Guest presenters may be used to address specific topics.

HB 607. Nutrition of Mothers and Children. 3 Hours.
This course will cover concepts in MCH nutrition at three levels (biology, epidemiology and prevention/policies/practice) specific to 4 core topics over-nutrition/obesity; under-nutrition; infant and toddler nutrition; and pregnancy/fetal nutrition. Half of each class session will be devoted to interactive discussion.

HB 608. Womens Health and Social Behavior. 3 Hours.
This course examines social and behavioral factors that adversely affect women’s health. Students learn to apply gender specific theories to design health interventions tailored towards women.

HB 609. African-American Health Issues. 3 Hours.
This is an intermediate level course that focuses on: epidemiological data illustrating the health risks experienced by African-Americans; sociocultural factors essential for understanding and enhancing the health of African-Americans; effective health-related prevention programs for African-Americans.

HB 610. Health Promo/Disease Prevent:Adv Theory/Practice. 3 Hours.
This course is a comprehensive overview of methods used to develop health promotion and disease prevention programs. It focuses on understanding, synthesizing, and applying behavior change theories to public health program development. The course includes the critical review of existing assessment measurements, the development of theory-based measures and evaluation principles in the context of intervention development and implementation.

Prerequisites: HB 600 [Min Grade: C]

HB 611. Mental Illness as a Public Health Issue. 3 Hours.
This course is designed to increase knowledge of mental illness at the individual, community, and population levels. It also covers historical and contemporary models and research on the etiology, diagnosis, assessment, treatment and prevention of mental and other behavioral health disorders.

HB 614. Cancer Control in the Community. 3 Hours.
Students will learn to apply basic health behavior and program planning theory and models to develop, plan, implement and assess culturally and socially appropriate interventions within a public school and/or community setting. Through service learning, students will have the opportunity to implement interventions in a community setting intended to promote healthy nutrition choices, institute exercise practices, lower tobacco usage and promote the use of skin protection.

Prerequisites: HB 624 [Min Grade: C] or HB 643 [Min Grade: C]

HB 624. Advanced Social and Behavioral Science Theory. 3 Hours.
Advanced review of selected behavioral science concepts and theories useful for developing health promotion programs; social cognitive theory and the transtheoretical model of change are examined in depth. This course may be required for some MPH students. Course will be graded by letter. 3 hours.
HB 624Q. Advanced Social and Behavioral Science Theory Online. 3 Hours.
The aim of this course is to provide students with a broad understanding of theories of health behavior change with a strong focus on those theories that are most widely used in research and practice. Emphasis will be given to the discussion and elaboration of important theoretical concepts as well as their application in specific health behavior interventions. This class will take an ecological perspective and discuss theories that approach behavior change from various different levels. Basic theories that are covered in this course include individual level models (Health Belief Model, Theory of Planned Behavior, Transtheoretical Model), interpersonal level models (Social Cognitive Theory), and community level models (community organization and other participatory models like Community Based Participatory Research, Diffusion of Innovations). Moreover, we will cover advanced topics related to using theory in research and practice, such as the PRECEDE-PROCEED planning model, Social Marketing tools, and the RE-AIM model.

HB 625. Dissemination and Implementation in Health. 3 Hours.
The course will offer an introduction to dissemination and implementation science, an interdisciplinary field focused on improving the transition of evidence-based health practices, programs, and interventions from research studies into “real-world” settings. Course will be graded by letter. 3 hours.
Prerequisites: HB 600 [Min Grade: C] and HB 641 [Min Grade: C]

HB 627. GIS for Public Health. 3 Hours.
This is an introductory course covering the theory and application of geographic information systems (GIS) for public health. Through this course, students will develop basic GIS skills, including GIS operations such as buffering, geocoding, layering, and spatial queries. Students will learn how to use those operations to both describe and propose solutions for public health challenges. The course will address introductory cartography and basic statistical aspects of spatial analysis. Learning will occur through lab exercises, case studies and homework exercises. The course will consist of one hour-long lecture/discussion and two hours of supervised lab/lecture each week. Course will be graded by letter. 3 hours.

HB 630. Health Communications: Theory and Practice. 3 Hours.
This course is designed to investigate the role of communication theories and methods in promoting public health and preventing disease. Both theoretical background in communication and behavioral science and practical communication intervention development methods will be addressed.
Prerequisites: HB 624 [Min Grade: C]

HB 630Q. Communications Skills for the Health Professional. 3 Hours.
Research indicates that there are strong positive relationships between a healthcare team member’s communication skills and a patient’s capacity to follow through with medical recommendations, self-manage a chronic medical condition, and adopt preventive health behaviors. Studies conducted during the past three decades show that the health professional’s ability to explain, listen and empathize can have a profound effect on biological and functional health outcomes as well as patient satisfaction and experience of care. Communication skills with the patient, within a team and to the public are essential skills for the health professional. This course will cover interpersonal foundations for human communication, effective patient communication strategies (active listening and motivational interviewing), risk communication and health communications.

HB 635. Communities, Families & Health. 3 Hours.
This course is designed for graduate students in public health and related fields interested in working with families and communities to improve health outcomes. It is intended to provide students with a broader understanding of the structural and psychosocial factors related to health and well-being. To do so, the course will focus on theoretical frameworks that draw on an ecological perspective and examine how factors associated with families, peers, schools, neighborhoods, and communities influence health. Emphasis will also be placed on the relevance of individual and community assets for the science of Health Behavior and the broader public health arena. Course will be graded by letter. 3 hours.

HB 636. Developing Interventions to Promote Public Health. 3 Hours.
This course is intended to provide students with a comprehensive understanding of the range and diversity of intervention approaches to behavior change and their application in public health. Emphasis will be placed on developing skills for designing interventions: a) in various public health settings, b) for specific population subgroups, c) based on determinants identified to be most influential and amenable to intervention, and d) within the confines of available resources. Students will also apply previously acquired research methods skills to design targeted interventions that are salient to needs of particular audiences, including formative research, theory selection, process evaluation, implementation tracking and outcome evaluation. This course uses lecture and seminar format. Course will be graded by letter. Pre-requisite HB 624. 3 hours.
Prerequisites: HB 624 [Min Grade: C]

HB 636Q. Developing Interventions to Promote Public Health Online. 3 Hours.
This course is intended to provide students with a comprehensive understanding of the range and diversity of intervention approaches to behavior change and their application in public health. Emphasis will be placed on developing skills for designing interventions: a) in various public health settings, b) for specific population subgroups, c) based on determinants identified to be most influential and amenable to intervention, and d) stay within the confines of available resources.

HB 638. Public Health Promotion and Aging Seminar. 3 Hours.
Exploration of current problems of the elderly, introduction to broad principles of health promotion for the elderly and review model health promotion programs. Course will be graded by letter.

HB 638Q. Public Health Promotion and Aging Seminar Online. 3 Hours.
Exploration of current problems of the elderly, introduction to broad principles of health promotion for the elderly and review model health promotion programs. Course will be graded by letter. 3 hours.

HB 641. Research Methods in Behavioral Science. 3 Hours.
Review of research methodology in behavioral sciences. Formulation of research questions, causality, experimental and quasi-experimental designs, reliability and validity, reporting findings. Course will be graded by letter. 3 hours Preq: Requires permission of instructor.
HB 641Q. Research Methods in Behavioral Sciences Online. 3 Hours.
This course is required for all Health Behavior MPH programs and the MSPH in clinical research in Health Behavior. The objective is to give Health Behavior and other students a broad overview of scientific methods for quantitative research, qualitative research, mixed methods research and basic concepts in survey development and outcome evaluation. The students will be able to identify the major steps and processes involved in health promotion or behavioral science research projects. These steps begin with the formulation of a research question and end with the reporting of the findings.

Prerequisites: HB 641 [Min Grade: C]

HB 643Q. Health Program Evaluation Online. 3 Hours.
This course is designed to provide graduate students in public health and related fields an exposure of the basic concepts and principles in program evaluation. The course will provide an overview of major steps and strategies involved in formative, process, and outcome evaluation.

Prerequisites: HB 641 [Min Grade: C]

HB 643. Health Program Evaluation. 3 Hours.
Principles and procedures to evaluate health promotion/disease prevention programs: data collection methods, instrument-scale development, measurement, evaluation designs and analysis of case studies of disease prevention literature on evaluation. Course will be graded by letter. Prerequisite: HB 641. 3 hours.

Prerequisites: HB 641 [Min Grade: C]

HB 640. Adolescent Health: A Social and Behavioral Perspective. 3 Hours.
Designed to provide students with the most current knowledge and analysis of issues influencing the health and well-being of adolescents. Theoretical frameworks that draw on an ecological perspective will provide a better understanding of how families, peers, schools, and neighborhoods influence risk and protective factors in youth. Emphasis will be placed on the relevance of adolescent health issues for the science of Health Behavior and the broader public health arena. Course will be graded by letter. 3 hours.

Prerequisites: HB 624 [Min Grade: C]

HB 655. Family Violence/Child Victimization. 3 Hours.
Introduction: The purpose of this course is for students to gain a comprehensive knowledge of child maltreatment, family violence, child and youth victimization, and youth perpetration of violence. The course will focus on multi-disciplinary theoretical frameworks to explain family violence and subsequent effects on child/youth/young adult functioning including behavioral, social, and physical and mental health consequences.

Prerequisites: HB 624 [Min Grade: C]

HB 680. Health Promotion through Radio Outreach. 3 Hours.
Alternative methods for delivering health promotion messages to “hard-to-reach” audiences are being explored across the U.S. This course examines the strategy known as “entertainment education”, specifically in terms of radio programming. Students who enroll will participate on the “BODYLOVE” script writers group as they learn to apply principals of behavior change in an “entertainment-education” format. “BODYLOVE” is a radio drama that is aired across the state of Alabama to education about risk factors for cardiovascular disease.

Prerequisites: HB 624 [Min Grade: C]

HB 692. Principles and Practices of Community Organization. 3 Hours.
Seminar designed as an integrative experience for persons working with community groups. The focus is on learning to use available resources and advocating change to maximize community involvement. NOTE: Requires permission of instructor.

HB 695. Seminar on Selected Health Behavior Topics. 1,3 Hour.
Seminar covering a variety of health behavior topics. Course will be graded as Pass/No Pass. Prerequisite: Permission of instructor. 3 hours.

HB 697. Internship. 3 Hours.
Field experience under joint direction of appropriate faculty member and qualified health education specialist. Written report specifying activities, products, and outcomes of experience submitted upon completion of internship. Course will be graded as Pass/No Pass.

Prerequisites: BST 601 [Min Grade: C] or BST 611 [Min Grade: C] and BST 612 [Min Grade: C] and ENH 600 [Min Grade: C] and EPI 600 [Min Grade: C] and HB 624 [Min Grade: C] and HCO 600 [Min Grade: C]

HB 697Q. Internship Online. 3 Hours.
The internship provides an opportunity for each student to work in a public health setting in a position that carries responsibility and is of particular interest. Each placement is different, but all depend upon completion of most coursework, the ability to work with minimal supervision, and acquiring permission of the student’s SOPH advisor and on-site preceptor/supervisor. Prerequisite: Completion of the MPH Core course requirements.

HB 698. Master’s Level Directed Research Health Education. 1-9 Hour.
Independent study with guidance of appropriate faculty. Includes activities such as literature review and evaluation. Course will be graded as Pass/No Pass. 1 - 9 hours.

HB 699. Master’s Level Project Research Health Education. 1-9 Hour.
Research for project under direction of research project committee. Course will be graded as Pass/No Pass. 3-6 hours.

HB 701. Theory-Based Measurement Development. 3 Hours.
The aim of this course is to introduce students to measurement development based on well-specified behavioral theories. This course will review and discuss key issues related to measurement development such as item/scale development, number of factors to retain rotation options and statistical programs. Prerequisite: Requires knowledge of elementary probability and statistics for non-statistics majors and BST 611. Course will be graded by letter. 3 hours.

Prerequisites: BST 611 [Min Grade: C]

HB 703. Writing for the Behavioral Sciences. 3 Hours.
The aim of this course is to develop and fine-tune scientific writing proficiency. In this course, students will read and critique a variety of books, essays, and articles about science and medicine, and complete numerous writing assignments and participate in peer review.

HB 706. Energetics: Scientific Foundations of Obesity and Other Health Aspects. 3 Hours.
The aim of this course is to acquaint individuals doing scholarly work related to obesity with the fundamental principles of energetics and their applications, and to use those in assessing the causes and treatment of obesity. The first part of the course will go over fundamental knowledge in this area, which will be covered by a midterm examination, and the second part of the course will go over research applications, which will be incorporated into the final term paper. Course will be graded by letter. 3 hours.

HB 707. Nutrition of Mothers and Children. 4 Hours.
This course will cover concepts in MCH nutrition at three levels (biology, epidemiology and prevention/policies/practice) specific to 4 core topics over-nutrition/obesity; under-nutrition; infant and toddler nutrition; and pregnancy/fetal nutrition. Half of each class session will be devoted to interactive discussion.
HB 714. Survey Research Methods. 3 Hours.
This course will provide students with a theoretical and practical overview of survey research methodology. Topics to be covered include questionnaire and interview design; tailoring instruments for specific settings, populations and methods of administration; maximizing reliability of measurement; construction of scales and indices; sampling theory and methods, assessing sampling bias, and maximizing response rates. NOTE: Must have doctoral standing or permission of instructor.

HB 720. Neighborhood Influences on HB. 3 Hours.
To expose students to classical and current theories of neighborhoods and their affects on development and behavior in such a way that they will develop an appreciation for the importance of neighborhood context and its impact on development and behavior and the ability to critically evaluate studies of neighborhoods and neighborhood context, and the conceptual tools to be able to incorporate neighborhood (and other) contextual effects into their own research.

HB 724. Advanced Social and Behavioral Science Theory. 3 Hours.
This course focuses on a thorough examination of theories and models of behavior change and their applications in both research and implementation in various fields of health promotion and public health. Basic knowledge of research methodology and statistics is required. Course will be graded by letter. 3 hours.

HB 730. Health Communication Research. 3 Hours.
This course is designed to investigate the role of communication theories and methods in promoting public health and preventing disease. Both theoretical background in communication and behavioral science and practical communication/intervention development methods will be addressed.
Prerequisites: HB 750 [Min Grade: C]

HB 736. Advanced Research Intervention Design. 3 Hours.
The aim of this course is to teach doctoral students how to develop, implement, and evaluate the efficacy of rigorous, theory-based, consumer driven behavioral interventions. In this course, students will learn and apply a variety of evidence-based methods and strategies for developing targeted behavioral interventions to meet the needs of specific audiences. In addition to the textbook, students will read and critique a number of scientific articles of interventions that vary widely by content area, outcome targets, settings and populations. Students will complete writing assignments and develop a comprehensive research intervention development, implementation, and evaluation plan.
Prerequisites: HB 724 [Min Grade: C]

HB 740. Advanced Health Program Evaluation Seminar. 3 Hours.
Advanced review of evaluation theories, approaches, and methods for assessing the plans, implementation, and effectiveness of health promotion programs. Course will be graded by letter. Prerequisite: HB 643 or other master's level evaluation course and a graduate level multiple regression or multivariate statistics course. 3 hours.
Prerequisites: HB 643 [Min Grade: C]

HB 741. Clinical Research Methods in the Behavioral Sciences. 3 Hours.
This course provides an in-depth treatment of the major clinical trial research methods used in the behavioral sciences. Emphasis is given to the clinical trial as it forms the cornerstone of valid methods of scientific inquiry. The course will also examine methods of collecting, analyzing, and interpreting data. Other topics include evaluating published research, writing research proposals and reports, and ethical considerations.
Prerequisites: HB 641 [Min Grade: C]

HB 742. Mediation and Moderation in Behavioral Science Research. 3 Hours.
This course is an elective course for doctoral students in public health and related fields, designed to provide an exposure to statistical mediation and moderation. Mediation and moderation are central in social and behavioral science research. Mediation explains and tests the underlying mechanisms by which the predictor variable affects the outcome variable, while moderation specifies under what conditions the predictor affects the outcome. Statistical techniques investigating mediation and moderation are among the most widely used data analysis techniques in a variety of disciplines. The primary goal of this course is to provide students with theoretical concepts of mediation and moderation and hands-on experience with relevant analytical techniques. Prerequisite: Students should have taken courses on multiple regression such as BST 611, BST or other equivalent courses. Course will be graded by letter. 3 hours.

HB 750. Advanced Theoretical and Scientific Basis of Health Education and Promotion. 3 Hours.
Provides doctoral students with in-depth examination of history and philosophy of health education; reviews professional competencies and outlines major theories of behavior change. Course will be graded by letter. 3 hours.

HB 760. Planning and Administration of Health Education and Promotion Programs. 3 Hours.
The purpose of this course is to teach and practice the three basic phases of comprehensive health education and promotion programs (planning, implementation and evaluation). Course will be graded by letter.
Prerequisites: HB 750 [Min Grade: C]

HB 770. Doctoral Studies Seminar. 1-3 Hour.
The broad intent of the course is to review current issues relevant to the field of Health Promotion/Health Education, critically examine the relationship between scholarship, research, ethics and funding and reflect and discuss theoretical aspects of Health Promotion/Health Education.
Prerequisites: HB 750 [Min Grade: C] and HB 730 [Min Grade: C] and HB 760 [Min Grade: C]

HB 771. Seminar in Health Education/Health Promotion Session I. 1 Hour.
The purpose of this course is to teach and practice the three basic phases of comprehensive health education and promotion programs (planning, implementation and evaluation). Course will be graded by letter. 3 hours.

HB 772. Seminar in Health Education/Health Promotion Session II. 1 Hour.
This course is the second in a series of three 1-hour Doctoral Seminar classes. This seminar series is designed to meet the specific needs of graduate students by better preparing them for successful completion of their respective degrees as well as their future as health education professionals. Course will be graded by letter. Pre-requisite HB 771.
Prerequisites: HB 771 [Min Grade: C]

HB 773. Seminar in Health Education/Health Promotion Session III. 1 Hour.
This course is the third of a series of three 1-hour Doctoral Seminar classes. This seminar series is designed to meet the specific needs of graduate students by better preparing them for successful completion of their respective degrees as well as their future as health education professionals. Course will be graded by letter. Pre-requisites HB 771 & 772. 1 hour.
Prerequisites: HB 771 [Min Grade: C] and HB 772 [Min Grade: C]
HB 798. Doctoral-Level Directed Res. 1-9 Hour.
Independent study with guidance of senior public health faculty. Course will be graded as Pass/No Pass. 1 - 9 hours.

Research for dissertation under direction of dissertation committee. Course will be graded as Pass/No Pass. Prerequisite: Students must be admitted to candidacy in order to register for this class. 1 - 9 hours.
Prerequisites: GAC D

HCO-Health Care Organization Courses

HCO 600. Introduction to Population Based Health Programs. 3 Hours.
The purpose of this course is to provide the student with fundamental concepts and information concerning the provision of public health services, enhance the student's ability to discuss and analyze population based interventions appropriate for delivery through the public health system and instill in the student a willingness to think creatively about the organization and financing of public health services.

HCO 600Q. Introduction to Population Based Health Programs Online. 3 Hours.
Introduction to Public Health Systems and Population-based Health Programs (HCO 600) is part of the UAB School of Public Health core curriculum. All MPH students, regardless of program affiliation, must complete this course in order to graduate. The course presents selected information, concepts, and methods from the field of public health. It is a survey class that introduces the student to the general topics of the HCOP department and scholars. Topics concerning the history, organization, economic underpinnings, and services of the public health system, as well as the structure, management and current status of the US health care system are discussed.

HCO 601. Health Economics. 3 Hours.
Economics as systematic way of thinking about use of resources. Tools of economics applied to issues of organization, delivery, financing, and outcome of health care. Develops economic principles and describes system of health care financing and delivery in the United States, providing basis for analyzing health management and policy options. With didactic coursework provided in HCO 601, doctoral students prepare a major paper under instructor's direction.
Prerequisites: BST 611 [Min Grade: C]

HCO 601Q. Health Economics Online. 3 Hours.
Economics as systematic way of thinking about use of resources. Tools of economics applied to issues of organization, delivery, financing, and outcome of health care. Develops economic principles and describes system of health care financing and delivery in the United States, providing basis for analyzing health management and policy options. With didactic coursework provided in HCO 601, doctoral students prepare a major paper under instructor's direction.

HCO 602. Narrative Public Health. 3 Hours.
The purpose of this course is to develop communication skills primarily through written exercises directly relevant to public health. Each exercise will explore and teach students different formats and techniques for communicating complex public health information to different audiences, such as colleagues, the lay public, public officials, or potential future public health students. NOTE: Only available to School of Public Health degree seeking students.

HCO 603. Public Health Policy. 3 Hours.
Theoretical framework and concepts used to understand evolution of public health policies and processes of policy formulation, implementation, and change. Significance of health policy for public health practical foundation of knowledge and skills useful in analyzing and responding to policy environment. Doctoral student will have an emphasis on independent analysis of health policy issues. Prreq: HCO 601 or HCO 701 recommended.

HCO 604. Policy Politics in Public Health. 3 Hours.
The purpose of the course is to explore the many dimensions of public health policy within the political, cultural, scientific, and social contexts of American policy formulation and implementation. This course will explore traditional public health topics such as access to health care and environmental safety as well as current events in public health policy issues.

HCO 605. Fundamental of MCH Part 1: Issues, Program and Policies. 3 Hours.
This course will focus primarily on public health problems and solutions of MCH populations in the U.S. In addition to the introductory information on specific health issues related to children and families, the evolution, status, and future performance of selected federal, state and community programs will be analyzed. Course work also includes a review of factors that influence policy development and program implementation including: 1) research, 2) data issues, 3) current public policy reform movements, and 4) advocacy. The course will include lectures and discussions. Students will gain information on the history of MCH and public health, selected MCH issues for each stage of growth and development, the importance of family and communities in addressing MCH issues and federal and state-specific programs and policies that address the needs of MCH populations.

HCO 605Q. MCH Fundamental I: Issues, Programs and Policies. 3 Hours.
The purpose of this course is to provide students with knowledge about current major Maternal and Child Health (MCH) issues (health, social, economic, and environmental) and programs and policies designed to address these issues among women of reproductive age, infants, and children. This course is required of students seeking the Master of Public Health (MPH) degree in the Department of Health Care Organization and Policy's MCH Leadership and Policy Track. Other students interested in this area are encouraged to register.

HCO 606. Fundamentals of Maternal and Child Health Part II: Application of Essential MCH Skills. 3 Hours.
The purpose of this course is to introduce students to basic research methods used by public health practitioners, with a specific focus on their use in the MCH field and to introduce the needs assessment, program planning, and evaluation processes specifically related to public health and finally to provide practical educational experiences to develop skills in applying several research methods and the range of activities needed to conduct needs assessments and use the information gathered to plan, direct, and evaluate public health programs and impact public health policies.
Prerequisites: HCO 605 [Min Grade: C]
HCO 606Q. HCO 606 MCH Fundaments II: Application of Essential MCH Skills Online. 3 Hours.
This course is taught entirely in online format, with sessions occurring two times per week for 1 hour and 15 minutes per session. Course sessions will entail a combination of lectures, group discussions via course discussion board, small-group activities, and student presentations based on assigned readings and projects. Active student participation in all class discussions and presentations is essential. Guest presenters may be used to address specific topics.
Prerequisites: HCO 605 [Min Grade: C] (Can be taken Concurrently) or HCO 605Q [Min Grade: C] (Can be taken Concurrently)

HCO 607. Public Health Law. 3 Hours.
Survey of legal principles governing selected public health problems as derived from court decisions, statutes, and regulations. Topics include constitutional limitations on the public power, administrative law, government regulation of competition, and medical liability.

HCO 607Q. Public Health Law Online. 3 Hours.
Survey of legal principles governing selected public health problems as derived from court decisions, statutes, and regulations. Topics include constitutional limitations on the public power, administrative law, government regulation of competition, and medical liability.

HCO 608. Reproductive Health. 3 Hours.
This course is intended to provide students with a foundation in reproductive health. It examines reproductive health issues, problems, policies, programs and services primarily in low-to-middle income countries.

HCO 608Q. Reproductive Health Online. 3 Hours.
This course is intended to provide students with a foundation in reproductive health. It examines reproductive health issues, problems, policies, programs and services primarily in low-to-middle income countries.

HCO 611. Child Health and Development: Womb to Young to Adulthood. 3 Hours.
The premise of this course is that an understanding of principles of development is critical to developing, implementing, and evaluating effective programs and services for children and women of childbearing age. Through didactic, experiential, and interactive learning activities students will explore the processes that influence children's health and development and the supports and services that are needed to enhance those mechanisms. Issues for children and adolescents with special health care needs and well as typically developing children and youth will be included in lectures, discussions, and class projects.

HCO 612. Strategic Management in Health Programs. 3 Hours.
Provides a framework for strategic management in health care and public health organizations and provides opportunities to develop strategic plans for health care organization. Objectives are: to relate prior knowledge and experience to specific problem-solving situations; encourage strategic thinking in decision making in health care organizations; provide opportunities to engage in and manage a group decision-making process; gain experience in analyzing the public health environment and prepare a strategic plan for that environment; and develop implementation plans to accomplish strategic plans.

HCO 612Q. Strategic Management in Health Programs Online. 3 Hours.
The overall goal of the course is to provide a framework for strategic management and an opportunity to develop a strategic plan through a case study. In addition, the course provides participants an opportunity to integrate the knowledge and experience they have acquired in previous courses and health care organizational settings into a broad theory of management.

HCO 613. Health Information in Technology & Policy. 3 Hours.
The overall purpose of this course is to familiarize students with current issues associated with health information technology and their impact on the U.S. healthcare system.

HCO 613Q. Health Information in Technology & Policy Online. 3 Hours.
The overall purpose of this course is to familiarize students with current issues associated with health information technology and their impact on the U.S. healthcare system.

HCO 615. Finance for Health Professionals. 3 Hours.
Financial management of public health care organizations. Emphasis on time value on money, capital raising methods, cost of capital, capital budgeting methods and working capital policy. Problem-solving orientation with applications to public health issues.

HCO 615Q. Finance for Health Professionals Online. 3 Hours.
Financial management of public health care organizations. Emphasis on time value on money, capital raising methods, cost of capital, capital budgeting methods and working capital policy. Problem-solving orientation with applications to public health issues.

HCO 618. Management Concepts in Public Health Programs. 3 Hours.
Organization structure, management, finance and budgeting, human resources, contracts, negotiation, and operations research in public health settings. Presentation of general principles combined with study of actual cases from practice. Note: Permission of instructor.

HCO 618Q. Management Concepts in Public Health Online. 3 Hours.
Organization structure, management, finance and budgeting, human resources, contracts, negotiation, and operations research in public health settings. Presentation of general principles combined with study of actual cases from practice. Note: Permission of instructor.

HCO 619. Social Work in Public Health. 3 Hours.
Introduction and overview of the field of public health and the subspecialty of public health social work. Provides practical macro-level skills and explores the role and functions of social workers within major public health programs.

HCO 619Q. Social Work in Public Health Online. 3 Hours.
Introduction and overview of the field of public health and the subspecialty of public health social work. Provides practical macro-level skills and explores the role and functions of social workers within major public health programs.

HCO 620. Health Insurance & Managed Care. 3 Hours.
Insurance is a mechanism for dealing with the consequences of uncertain future states of the world. Health insurance and its consequences are significant reasons why health care markets differ from others. This course will present the underpinnings of health insurance, the classic problems of moral hazard and adverse selection, issues in the nature and effects of competition in the evolving managed care industry, employer sponsored health insurance, Medicare, Medicaid and current topics in health insurance and managed care.
Prerequisites: HCO 601 [Min Grade: C] or HA 645 [Min Grade: C] or AH 701 [Min Grade: C]
### HCO 620Q. Health Insurance & Managed Care Online. 3 Hours.

Insurance is a mechanism for dealing with the consequences of uncertain future states of the world. Health insurance and its consequences are significant reasons why health care markets differ from others. This course will present the underpinnings of health insurance, the classic problems of moral hazard and adverse selection, issues in the nature and effects of competition in the evolving managed care industry, employer sponsored health insurance, Medicare, Medicaid and current topics in health insurance and managed care.

**Prerequisites:** HCO 601 [Min Grade: C] or HA 645 [Min Grade: C] or AH 701 [Min Grade: C]

### HCO 621. Clinical Decision Making and Cost-Effectiveness Analysis. 3 Hours.

The objectives of this course are to acquaint public health and other professionals with techniques of decision making under conditions of uncertainty and the basics of cost-effectiveness analysis. Topics include decision analysis, Markov processes, Monte Carlo simulation, valuing diagnostic tests, and measuring the costs and outcomes of health service programs. Students who successfully complete the course will be able to understand the strengths and limitations of these types of analysis and determine the relevance of research findings to their own areas of expertise. NOTE: If course work (BST 600 or BST 611 and BST 612) are not met, then permission of instructor is required.

**Prerequisites:** BST 601 [Min Grade: C] or (BST 611 [Min Grade: C] and BST 612 [Min Grade: C])

### HCO 621Q. Clinical Decision Making and Cost-Effectiveness Analysis Online. 3 Hours.

In public health and medicine indeed, in all aspects of life, choices are unavoidable. Difficult choices must be made in such areas as patient care, clinical guideline development, and public health policy. These decisions often must be made in the face of great uncertainty. Decision analysis aims to formally evaluate those decisions and to make decisions from an informed perspective regarding expected outcomes. Cost-effectiveness analysis applies decision analysis to circumstances where both costs and outcomes are important criteria for making choices. This course is designed to provide students with an understanding of the methods and uses of decision analysis and cost-effectiveness analysis.

**Prerequisites:** BST 601 [Min Grade: C] or (BST 611 [Min Grade: C] and BST 612 [Min Grade: C])

### HCO 622. Design and Conduct of Cost-Effectiveness Research. 3 Hours.

The purpose of this course is to familiarize students with the design and implementation of cost-effectiveness and cost-benefit analysis.

**Prerequisites:** HCO 621 [Min Grade: C] or HCO 721 [Min Grade: C]

### HCO 623Q. Pharmacoeconomics and Regulation Online. 3 Hours.

The purpose of this course is to provide an introduction to pharmacoeconomics and the regulatory role of the FDA. It is open to students in the MPH program and Master's and Doctoral students from the School of Nursing and the School of Health Professions.

**Prerequisites:** HCO 601 [Min Grade: C] and (HCO 621 [Min Grade: C] or HCO 721 [Min Grade: C])

### HCO 624. Healthy Lifestyles for the MCH Population: Integrating Nutrition with Physical Activity. 3 Hours.

This course will examine healthy lifestyles from the community viewpoint. Although nutrition is the primary focus of the course, it will also explore how nutrition and physical activity are integrated in programs and interventions for healthy lifestyles for the MCH population. There will be an emphasis on childhood obesity prevention and intervention. The course will integrate the Life Course model, illustrating the importance of early intervention as well as intervention at critical periods. This course will allow students to design an intervention and develop a policy paper to support MCR nutrition initiatives. Students will learn community-based strategies for promoting healthy lifestyles through improved eating and physical activity behaviors. The application of community-based planning based on "five cornerstones of a healthy lifestyle" (MCRB and ASTPHND,2008): access, collaboration, science and research, workforce, and communication will be included.

### HCO 624Q. Healthy Lifestyles for the MCH Population: Integrating Nutrition with Physical Activity. 3 Hours.

This proposed course will look at nutrition and physical activity from the community nutrition and physical activity viewpoint. It will explore nutrition and physical activity in the MCH population and students will become aware of the different public health venues where current interventions are occurring as well as where intervention can occur.

### HCO 625. Advanced Leadership and Practice in MCH Part I - Introduction to Leadership. 1 Hour.

The purpose of this course is to provide students with the leadership skills necessary to work effectively at a community, state or regional level in the capacity of designing and advocating for programs and policies necessary to promote the health of women, children and families. This course is required for MPH and DrPH students in the HCOP/Maternal and Child Health track and is open to students from other tracks and departments. It is offered as a 3, one-hour course sequence to allow sufficient time for students to develop the background and skills that build upon each other. Other faculty members and external guest presenters will be invited to address specific topics. The course will include lectures, small group discussions, exercises, individual projects and service-learning field-based activities. Student presentations are required.

### HCO 625Q. Advanced Leadership and Practice in MCH Part One - Introduction to Leadership Online. 1 Hour.

The purpose of this course is to provide students with the leadership skills necessary to work effectively at a community, state or regional level in the capacity of designing and advocating for programs and policies necessary to promote the health of women, children and families. This course is required for MPH and DrPH students in the HCOP/Maternal and Child Health track and is open to students from other tracks and departments. It is offered as a 3, one-hour course sequence to allow sufficient time for students to develop the background and skills that build upon each other. Other faculty members and external guest presenters will be invited to address specific topics. The course will include lectures, small group discussions, exercises, individual projects and service-learning field-based activities. Student presentations are required.

### HCO 626. Adv Leadership and Practice in MCH Module II - Collaborative Leadership and Advocacy. 1 Hour.

This is the second of a three course sequence designed to equip students with knowledge and skills needed to provide leadership in the development and delivery of needed programs and policies to promote the health and well being of MCH populations.

**Prerequisites:** HCO 625 [Min Grade: C]
HCO 626Q. Adv Leadership and Practice in MCH Module II - Collaborative Leadership and Advocacy Online. 1 Hour.
This is the second of a three course sequence designed to equip students with knowledge and skills needed to provide leadership in the development and delivery of needed programs and policies to promote the health and well being of MCH populations.

HCO 627. ADV Leadership and Practice in MCH Module III - Into the Streets: Lead/Field Experience. 1 Hour.
The purpose of this course sequence is to provide students with the leadership skills necessary to work effectively at a community, state or regional level in the capacity of designing and advocating for programs and policies necessary to promote the health of women, children and families.

Prerequisites: HCO 625 [Min Grade: C]

HCO 627Q. Adv Leadership and Practice in MCH Module III - Into the Streets: Lead/Field Exp Online. 1 Hour.
The purpose of this course sequence is to provide students with the leadership skills necessary to work effectively at a community, state or regional level in the capacity of designing and advocating for programs and policies necessary to promote the health of women, children and families.

Prerequisites: HCO 625 [Min Grade: C]

HCO 628. Qualitative and Mixed Methods Research in Public Health. 3 Hours.
The class is designed to be interactive with practice sessions in class for the various skills of qualitative research: observation, writing, coding, analysis, individual interviewing, and focus group discussions. There will be three activities that will give the students a taste for being “in the field”: non-participant observation, a mock focus group, and in-depth interviews. Students will experience writing field notes, memo writing, coding, and abstracting from data via these three activities. Because many students will be applying qualitative methods in evaluation and needs assessment projects in the field of public health, we will also focus on these aspects in class.

HCO 629. Immigrant Health. 3 Hours.
The purpose of this course is to provide an overview of key public health issues facing immigrant populations in the US, including the interrelationship between migration processes and health behaviors and outcomes, health and disease burdens for immigrant subgroups (e.g., Latinos, children), health care access and use, and health promotion/disease prevention.

HCO 630. Introduction to Organization and Policy in Public Health. 3 Hours.
This course is the first of three HCOP departmental core courses for MPH students matriculating in an HCOP track, including Maternal and Child Health, Health Care Organization and Health Care Policy. It will substitute for the general School of Public Health core course for departmental students.

HCO 630Q. Introduction to Organization and Policy in Public Health Online. 3 Hours.
This course introduces the history and legal basis of key components of public health, infectious disease control, maternal and child health, environmental health and the provision of health services. It then examines models of public health policy and the political context of policy making. Finally, the course includes an examination of the organization of the U.S. public health system and key strategic decisions facing the system. An examination of public health general and professional ethics is interwoven through the course.

HCO 631. Public Health Demography. 3 Hours.
This course will focus on principles of demography (the study of population) as related to public health. Course content covers: the measurement and analysis of fertility, mortality, population size, and composition; sources and evaluation of demographic data, techniques of population projection; and determinants and consequences of population trends and processes with applications for health and health care.

HCO 631Q. Public Health Demography Online. 3 Hours.
This course will focus on principles of demography (the study of population) as related to public health. Course content covers: the measurement and analysis of fertility, mortality, population size, and composition; sources and evaluation of demographic data, techniques of population projection; and determinants and consequences of population trends and processes with applications for health and health care.

HCO 632. Readings in Maternal Child Health. 1-3 Hour.
Critical analysis of literature in single area of maternal and child health under supervision of faculty member.

HCO 633. Research Design and Analysis. 2 Hours.
The Research Design and Analysis course is designed to provide graduate students with an introduction to fundamental tools needed to propose, conduct, and assess outcomes of their research. The course will take them from the basics of developing hypotheses, conducting literature reviews (including an introduction to legal research) and critically analyzing literature reviewed, formalizing constructs to be addressed and developing valid, accurate and reliable tools/techniques to measure those constructs, and finally, will address how to analyze and interpret results.

HCO 633Q. Research Design and Analysis Online. 2 Hours.
The Research Design and Analysis course is designed to provide graduate students with an introduction to fundamental tools needed to propose, conduct, and assess outcomes of their research. The course will take them from the basics of developing hypotheses, conducting literature reviews (including an introduction to legal research) and critically analyzing literature reviewed, formalizing constructs to be addressed and developing valid, accurate and reliable tools/techniques to measure those constructs, and finally, will address how to analyze and interpret results.

HCO 635. Writing Grants and Programming Awards in Public Health. 3 Hours.
Whether your public health career path leads you to a position in a public, non-profit, private, or academic setting, you will very likely be involved in some capacity with either writing or managing a grant. This course on grant-writing will provide you with in-demand skills necessary to possess when seeking a job in the field of public health. You will learn how to: 1) communicate your ideas effectively and persuasively, 2) write clearly and succinctly, 3) prepare a coherent, logical research plan, and 4) develop an organizational and management plan for carrying out your work. At the completion of this course, students will have written a grant proposal that is suitable for submission to an extramural funding agency.

HCO 640. Disaster and Emergency Management. 3 Hours.
The course will provide a concerted look into the realm of disaster and emergency management. Discussions in this course will concentrate on how disaster and emergency management has changed since 9/11 including new legislation and governmental structures. The course will culminate with a look at the roles and responsibilities of the public health system in preparing for and responding to both natural and man-initiated disasters. This course is intended for advanced MPH or doctoral students with an interest in preparedness policy, emergency management, or public health preparedness.
HCO 641. Health Preparedness and Response Policy. 3 Hours.
Preparedness policy can be defined as the sum of national and subnational governmental activities with the intent to protect the public's health and security. Discussions in this course will focus on policy and policy making in the U.S. and more particularly on preparedness policy and its evolution since 9/11. The purpose of this course will be to develop a skill set that will allow students to frame issues into social, cultural, regional and ethical norms, consider historical and political influence policy choices. Courses is for advanced MPH or doctoral students with an interest in preparedness policy, emergency, management, or public health preparedness.

HCO 642. Preparedness and Agriculture. 3 Hours.
This course presents the potential effects of an animal disease outbreak, whether natural, accidental, or deliberate, on the affected communities. Topics covering the prevention and diagnosis of and the response to an animal disease outbreak will be presented. Examples of the interaction of public health with other disciplines will be provided. This course is designed for MPH students with an interest in preparedness policy, emergency management, or public health preparedness. NOTE: It is preferred that this course be completed during the final year of enrollment; however, any MPH candidate who has completed the entire core curriculum is eligible to enroll in the course.

HCO 643. Emergency Preparedness Exercise, Evaluation & Communication. 3 Hours.
This course will provide participants with an understanding of the psychological processes that occur during crises, how those processes impact human functioning, and how communication plays a critical role in the psychological outcomes of crisis situations.

To introduce the needs assessment, program planning and evaluation processes specifically related to public health and to provide practical experiences to develop skills in the range of activities needed to conduct needs assessments and use the information gathered to plan, direct, and evaluate public health programs and impact public health policies.

HCO 670. Social and Ethical Issues in Public Health. 3 Hours.
This class examines situations where public health programs or policies create or become embroiled in social controversies. Topics examined include: the underlying social conflicts involved in these controversies, the nature of the types of groups involved, and the ethical dilemmas that face decision makers in these situations.

HCO 670Q. Social & Ethical Issues in Public Health Online. 3 Hours.
This class examines situations where public health programs or policies create or become embroiled in social controversies. Topics examined include: the underlying social conflicts involved in these controversies, the nature of the types of groups involved, and the ethical dilemmas that face decision makers in these situations.

HCO 672. Perinatal Health: Issues, Data & Policies. 3 Hours.
The purpose of this course is to provide students with knowledge related to perinatal health issues and policies. In addition, the course will allow students to gain basic skills in analysis of population-based data sets using SAS. This course at the 600-level is an elective for students seeking the Master of Public Health (MPH) degree and the Doctor of Public Health (DrPH) in the Department of Health Care Organization and Policy's MCH Leadership and Policy Track. It is offered at the 700-level for doctoral students. Other students interested in this area are encouraged to register. An introductory SAS course is recommended but not required.

HCO 672Q. Perinatal Health: Issues, Data & Policies Online. 3 Hours.
The purpose of this course is to provide students with knowledge related to perinatal health issues and policies. In addition, the course will allow students to gain basic skills in analysis of population-based data sets using SAS. This course at the 600-level is an elective for students seeking the Master of Public Health (MPH) degree and the Doctor of Public Health (DrPH) in the Department of Health Care Organization and Policy's MCH Leadership and Policy Track. It is offered at the 700-level for doctoral students. Other students interested in this area are encouraged to register. An introductory SAS course is recommended but not required.

HCO 673. Applied Health Policy: Global Child Health Issues. 3 Hours.
The focus of the course will be on four current and complex policy issues (2 domestic; 2 international): refugee health; immunization activities and the link to autism; obesity in children and physical inactivity; and child labor. Pertinent background information related to international, federal, state and local policies and systems will be studied. Students should gain both technical capacity for analysis and an understanding of the health policy process. This course is intended for advanced MPH or doctoral students with an interest in health policy, international health, or maternal and child health.

HCO 675. Improving Health Care Quality and Outcomes. 3 Hours.
Examination of current issues in quality of care and outcomes management. The course includes a review of past and current efforts, tools, and theories of quality assessment, assurance, utilization management, and measuring and improving outcomes.

HCO 677. Patient-Based Outcomes Measurement. 3 Hours.
Detailed examination of patient-based outcomes measurement in the context of health care delivery systems and health care policy. Topics include: Theories and development of outcome evaluation instruments; disease-specific and generic measures of outcome; utility estimation; mediators and moderators of health outcomes; issues in instrument selection and administration; methods for evaluating outcomes data; and uses of outcomes data.

Prerequisites: BST 601 [Min Grade: C] and (BST 611 [Min Grade: C] or BST 612 [Min Grade: C])

HCO 677Q. Patient-Based/Centered Outcomes Research Online. 3 Hours.
This course will provide an in-depth overview of the concepts, methods, and instruments used to evaluate health from the perspective of the individual. The overall objective of this course is to provide a detailed examination of patient-based/centered outcomes measurement in the context of health care delivery systems and health care policy. The course will incorporate lectures, classroom discussion, in-class exercises, and occasional guest speakers.

Prerequisites: BST 601 [Min Grade: C] or (BST 611 [Min Grade: C] and BST 612 [Min Grade: C])

HCO 680. Aging Policy. 3 Hours.
Providing for the physical and economic well-being of the aging population is a continual challenge facing society. The objectives of this course are to develop an understanding of the influence of demographic changes, economic factors, and public policy on the health status and health care of the aging population; investigate the work, retirement, savings, and health insurance decisions facing the elderly; describe the system of health care financing and delivery arrangements for the elderly in the United States and other developing countries. NOTE: Basic biostatistics or equivalent required.

Prerequisites: BST 601 [Min Grade: C]
HCO 686. Integrative Health Policy Analysis. 3 Hours.
The aim of this interdisciplinary course is to engage students in critical thinking about the goals, paradigms, effectiveness and implementation of health care policy in the United States. The course will incorporate several concepts from public policy analysis, public policymaking, health politics, public opinion research, media research, and technical-writing communication. NOTE: There are no prerequisite course requirements; however, students are expected to be familiar with the basics of the U.S. health care system and prior experience in health policy will be useful.

HCO 687. Empirical Methods for Health Research. 3 Hours.
The objectives of the course are to provide thorough treatment of simple and multivariate regression models, simple binary dependent variable models, instrumental variables estimators, sample selection and two-part models, and simple panel data models. Course provides students with an opportunity to acquire hands-on software. This course is designed for students who have had limited experience with regression analysis but a working knowledge of simple statistics, probability distributions, and basic calculus. Prereq: Students should have had an upper level undergraduate or graduate course in statistics and probability; basic calculus.
Prerequisites: BST 601 [Min Grade: C]

HCO 687Q. Empirical Methods for Health Research Online. 3 Hours.
The purpose of this course is to provide students with an understanding of regression analysis in context of health services and health policy research. The focus is strictly on applied empirical work, rather than the mathematical concepts that go into creating the empirical tools. This course should be useful to graduate students who anticipate analyzing large, secondary datasets and interpreting results as part of their degree requirements or in their careers. Prerequisites: senior undergraduate or graduate course in Statistics & Probability Distributions Basic Calculus.
Prerequisites: BST 601 [Min Grade: C]

HCO 690. Integrative Experience. 3 Hours.
This course has been designed "to synthesize and integrate knowledge acquired in course work and other learning experiences and to apply theory and principles in a situation that approximates some aspect of professional practice" through the analysis of actual cases from the annals of public health practice, participation in a strategic planning exercise, and the development of a new case from current and emerging areas of critical interest to public health. Students working in multi-disciplinary groups will demonstrate their ability to apply the general and specific public health knowledge they have acquired through their courses of study and effectively apply that knowledge across disciplines to the effective resolution of public health problems.

HCO 691. Policy Analysis: Modeling & Simulation. 3 Hours.
Training in basic skills necessary to design, test, implement, manage, present, and critique policy analysis in health care sector. Fundamentals of policy research design, and linkage between theory and operation. Various research techniques examined case studies and analyses of secondary data. Emphasis on choosing appropriate analytical strategies for particular policy issues. Data analysis using computers and critical evaluation of technical policy literature. Special topics in econometrics also addressed. Original policy analytic paper required at end of sequence.
Prerequisites: BST 601 [Min Grade: C] and HCO 601 [Min Grade: C]

HCO 691Q. Policy Analysis Modeling and Simulation Online. 3 Hours.
This course shows how models are built and used for public policy making and decision analysis. Topics include spreadsheet models, discrete event modeling, queuing, random number generation, Markov models, systems dynamics models and agent based models. If time permits, we will also look at Linear Programming. You should already have some minimal experience in using a spreadsheet program (Excel, Lotus, Quattro, etc.).
Prerequisites: HCO 601 [Min Grade: C] and BST 601 [Min Grade: C]

HCO 692. Adv Top Hlth Disparities Rsch. 3 Hours.
The primary aim of this course is to engage students in critical thinking about the current paradigms for health care disparities research in the US. As a part of this process, students will be challenged to think about the social, political, and economic determinants of health disparities for diverse health care consumers, to identify substantive trends and gaps in the health disparities literature, and to develop an innovative research or policy-oriented strategy for reducing health disparities. A secondary aim is to provide students with a broad overview of health and health care disparities according to race/ethnicity, gender, and health status. The three specific racial/ethnic groups are: African Americans, Hispanic/Latinos, and Asian/Pacific Islanders. The gender classifications include men and women. The health status groupings include persons with chronic health problems (such as diabetes or mental health condition, e.g. schizophrenia).

HCO 694. Special Problems in Policy Analysis. 3 Hours.
Continuation of HCO 693 - Policy Analysis: Modeling and Simulation.
Prerequisites: HCO 693 [Min Grade: C]

HCO 695. Seminar in Health Care Organization. 1-3 Hour.
Factors currently influencing finance and administration of public and private health programs; availability, accessibility, and utilization by selected population groups.

HCO 696. Selected Topics in Public Health Finance. 3 Hours.
Financing of public health programs; sources of revenue (grants and contracts, tax revenues, and service fees), capital financing, and management of cash flows Techniques of maximizing revenues in public health programs.
Prerequisites: HCO 690 [Min Grade: C]

HCO 697. Internship. 3 Hours.
Field experience under joint direction of faculty member and qualified specialist working in selected aspects of public health. Written report specifying activities, products, and outcomes of experience required upon completing the internship.
Prerequisites: BST 601 [Min Grade: C] or (BST 611 [Min Grade: C] and BST 612 [Min Grade: C]) and ENH 600 [Min Grade: C] and EPI 600 [Min Grade: C] and HB 600 [Min Grade: C] and HCO 630 [Min Grade: C]

HCO 697Q. Internship Online. 3 Hours.
Field experience under joint direction of a public health faculty member and qualified specialist working in selected aspects of public health.
Prerequisites: BST 601 [Min Grade: C] or (BST 611 [Min Grade: C] and BST 612 [Min Grade: C]) and ENH 600 [Min Grade: C] and EPI 600 [Min Grade: C] and HB 600 [Min Grade: C] and HCO 630 [Min Grade: C]

Independent study with guidance of appropriate faculty.
Research for project under direction of appropriate faculty and/or research project committee.

HCO 701. Health Economics. 3 Hours.  
Economics as systematic way of thinking about use of resources. Tools of economics applied to issues of organization, delivery, financing, and outcome of health care. Develops economic principles and describes systems of health care financing and delivery in the United States, providing basis for analyzing health management and policy options. With didactic coursework provided in HCO 601, doctoral students prepare a major paper under instructor's direction.  
Prerequisites: BST 611 [Min Grade: C]

HCO 703. Public Health Policy - Doctoral Level. 3 Hours.  
Theoretical framework and concepts used to understand evolution of public health policies and processes of policy formulation, implementation, and change. Significance of health policy for public health practical foundation of knowledge and skills useful in analyzing and responding to policy environment. Doctoral students will have an emphasis on independent analysis of health policy issues.  
Prerequisites: HCO 601 [Min Grade: C] or HCO 701 [Min Grade: C]

HCO 704. Advanced Public Health Economics. 3 Hours.  
Advanced analysis of economic concepts important to public health problems; government financing of health services, public health deliver, utilization of health, and public health services; and perspectives and policy issues in public health.  
Prerequisites: HCO 601 [Min Grade: C] or HCO 701 [Min Grade: C]

HCO 706. Strategic Mgmt Theory/Research. 3 Hours.  
AH 706: Strategic Management Theory and Research is to provide a forum for the introduction of the concepts and issues of strategic management in order to facilitate their understanding and communications. The mission of the strategic management track is to develop highly qualified strategic management scholars and teachers who are contributing to the field. We accomplish this mission through: Our strategic management courses, Faculty/student interaction, Publishing and presenting our work, and Teaching others.

HCO 708. Reproductive Health. 3 Hours.  
This course is intended to provide students with a foundation in reproductive health. It examines reproductive health issues, problems, policies, programs and services, primarily in low-to-middle income countries.

HCO 711. Child Health and Development: Womb to Young to Adulthood. 3 Hours.  
The premise of this course is that an understanding of principles of development is critical to developing, implementing, and evaluating effective programs and services for children and women of childbearing age. Through didactic, experiential, and interactive learning activities students will explore the processes that influence children's health and development and the supports and services that are needed to enhance those mechanisms. Issues for children and adolescents with special health care needs and well as typically developing children and youth will be included in lectures, discussions, and class projects.

HCO 713. Health Information Technology and Policy. 3 Hours.  
Expands on content of introductory course in health policy. Insights into system's attributes; characteristics dictating its structure and function.  
Prerequisites: HCO 603 [Min Grade: C] and HCO 607 [Min Grade: C]

HCO 715. Finance for Health Professionals. 3 Hours.  
Financial management of public health care organizations. Emphasis on time value on money, capital raising methods, cost of capital, capital budgeting methods and working capital policy. Problem-solving orientation with applications to public health issues.

HCO 718. Mgt Concepts in Pub Hlth Progs. 3 Hours.  
Organization structure, management, finance and budgeting, human resources, contracts, negotiation, and operations research in public health settings. Presentation of general principles combined with study of actual cases from practice.

HCO 720. Health Insurance and Managed Care. 3 Hours.  
Insurance is a mechanism for dealing with the consequences of uncertain future states of the world. Health insurance and its consequences are significant reasons why health care markets differ from others. This course will present the underpinnings of health insurance, the classic problems of moral hazard and adverse selection, issues in the nature and effects of competition in the evolving managed care industry, employer sponsored health insurance, Medicare, Medicaid and current topics in health insurance and managed care.  
Prerequisites: HCO 601 [Min Grade: C] or HA 645 [Min Grade: C] or AH 701 [Min Grade: C]

HCO 721. Clinical Decision Making and Cost Effectiveness Analysis. 3 Hours.  
The objectives of this course are to acquaint public health and other professionals with techniques of decision making under conditions of uncertainty and the basics of cost-effectiveness analysis. Topics include decision analysis, Markov processes, Monte Carlo simulation, valuing diagnostic tests, and measuring the costs and outcomes of health service programs. Students who successfully complete the course will be able to understand the strengths and limitations of these types of analysis and determine the relevance of research findings to their own areas of expertise. NOTE: If course work (BST 601 or BST 611 and BST 612) are not met, then permission of instructor is required.  
Prerequisites: BST 601 [Min Grade: C] or BST 611 [Min Grade: C] and BST 612 [Min Grade: C]

HCO 722. Cost-Effectiveness Research Methods. 3 Hours.  
The objective of this course is to familiarize students with the design and implementation of cost-effectiveness and cost-benefit analysis. Specific topics include cost estimation, effectiveness measurement, time preference, uncertainty, ethical issues, valuing health outcomes, and ethical issues in cost-effectiveness research. At the end of the course students will develop and present analysis plans related to their particular fields of practice. Preq: HCO 721 or permission of instructor.  
Prerequisites: HCO 721 [Min Grade: C]

HCO 723. Management of Complex Health Organizations. 3 Hours.  
Complexity as related to management of health organizations. Academic health centers as models of complex organization. Incentive systems, organizational politics, and ownership and control within context of high complex health organizations.
HCO 728. Qualitative and Mixed Methods Research in Public Health. 3 Hours.
The class is designed to be interactive with practice sessions in class for the various skills of qualitative research: observation, writing, coding, analysis, individual interviewing, and focus group discussions. There will be three activities that will give the students a taste for being “in the field”: non-participant observation, a mock focus group, and in-depth interviews. Students will experience writing field notes, memo writing, coding, and abstracting from data via these three activities. Because many students will be applying qualitative methods in evaluation and needs assessment projects in the field of public health, we will also focus on these aspects in class.

HCO 729. Immigrant Health. 3 Hours.
The purpose of this course is to provide an overview of key public health issues facing immigrant populations in the US, including the interrelationship between migration processes and health behaviors and outcomes, health and disease burdens for immigrant subgroups (e.g., Latinos, children), health care access and use, and health promotion/disease prevention. This course is designed to be taken by doctoral students in either a DrPH program or a health related PhD program at UAB. Knowledge of quantitative or qualitative methods and experience with data analysis will be helpful for completion of the final research project.

HCO 740. Disaster and Emergency Management. 3 Hours.
The course will provide a concerted look into the realm of disaster and emergency management. Discussions in this course will concentrate on how disaster and emergency management has changed since 9/11 including new legislation and governmental structures. The course will culminate with a look at the roles and responsibilities of the public health system in preparing for and responding to both natural and man-initiated disasters. This course is intended for advanced MPH or doctoral students with an interest in preparedness policy, emergency management, or public health preparedness.

HCO 741. Health Preparedness and Response Policy. 3 Hours.
Preparedness policy can be defined as the sum of national and subnational governmental activities with the intent to protect the public’s health and security. Discussion in this course will focus on policy and making in the U.S. and more particularly on preparedness policy and its evolution since 9/11. The purpose of this course will be develop a skill set that will allow students to frame issues into social, cultural, regional, and ethical norms, consider historical and political influence policy choices. Course is form advanced MPH or doctoral students with an interest in preparedness policy, emergency management, or public health preparedness.

HCO 742. Preparedness and Agriculture. 3 Hours.
This course presents the potential effects of an animal disease outbreak, whether natural, accidental or deliberate, on the affected communities. Topics covering the prevention and diagnosis of and the response to an animal disease outbreak will be presented. Examples of the interaction of public health with other disciplines will be provided. This course is designed for MPH students with an interest in preparedness policy, emergency management, or public health preparedness. NOTE: It is preferred that this course is completed during the final year of enrollment; however, any MPH candidate who has completed the entire core curriculum is eligible to enroll in the course.

HCO 743. Emergency Preparedness Exercise, Evaluation & Communication. 3 Hours.
This course will provide participants with an understanding of the psychological processes that occur during crises, how those processes impact human functioning, and how communication plays a critical role in the psychological outcomes of crisis situations.

HCO 772. Perinatal Health Issues. 3 Hours.
The purpose of this course is to provide students with knowledge related to perinatal health issues and policies. In addition, the course will allow students to gain basic skills in analysis of population-based data sets using SAS. This course at the 600-level is an elective for students seeking the Master of Public Health (MPH) degree and the Doctor of Public Health (DrPH) in the Department of Health Care Organization and Policy's MCH Leadership and Policy Track. It is offered at the 700-level for doctoral students. Other students interested in this area are encouraged to register. An introductory SAS course is recommended but not required.

HCO 773. Applied Health Policy: Global/Child Health Issues. 3 Hours.
The focus of the course will be on four current and complex policy issues (2 domestic; 2 international): refugee health; immunization activities and the link to autism; obesity in children and physical inactivity; and child labor. Pertinent background information related to international federal, state and local policies and systems will be studied. Students should gain both technical capacity for analysis and an understanding of the health policy process. This course is intended for advanced MPH or doctoral students with an interest in health policy, international health, or maternal and child health.

HCO 777. Patient-Based Outcomes Measures. 3 Hours.
This course will provide a detailed examination of patient based outcomes measurement in the context of health care delivery systems and health care policy.
Prerequisites: BST 611 [Min Grade: C] and BST 612 [Min Grade: C]

HCO 781. Research Methods and Study Design. 3 Hours.
This course examines empirical methods utilized in health policy and management research.
Prerequisites: HCO 787 [Min Grade: C]

HCO 782. Advanced Casual Inference. 3 Hours.
Casual inference involves the methods and thinking one uses to move from associations to cause-and-effect relationships. This course provides an intermediate treatment of econometric and biostatistical methods for the casual inference in public health.

HCO 786. Integrative Health Policy Analysis. 3 Hours.
The aim of this interdisciplinary course is to engage students in critical thinking about the goals, paradigms, effectiveness and implementation of health care policy in the United States. The course will incorporate several concepts from public policy analysis, public policymaking, health politics, public opinion research, media research, and technical-writing communication. NOTE: There are no prerequisite course requirements; however, students are expected to be familiar with the basics of the U.S. health care system and prior experience in health policy will be useful.
HCO 787. Empirical Methods for Health Research. 3 Hours.
The objectives of the course are to provide thorough treatment of simple and multivariate regression models, simple binary dependent variable models, instrumental variables estimators, sample selection and two-part models, and simple panel data models. Course provides students with an opportunity to acquire hands-on software. This course is designed for students who have had limited experience with regression analysis but a working knowledge of simple statistics, probability distributions, and basic calculus. Students must have upper level undergraduate or graduate coursework in statistics and probability; basic calculus. 
Prerequisites: BST 601 [Min Grade: C]

HCO 788. Longitudinal Meth Hlth Ser Res. 3 Hours.
This course provides an intermediate treatment of econometric and biostatistical methods for longitudinal analyses of data in public health. 
Prerequisites: HCO 787 [Min Grade: B]

HCO 791. Policy Analysis:Modeling & Simulation. 3 Hours.
Training in basic skills necessary to design, test, implement, manage, present, and critique policy analysis in health care sector. Fundamentals of policy research design, and linkage between theory and operation. Various research techniques examined case studies and analyses of secondary data. Emphasis on choosing appropriate analytical strategies for particular policy issues. Data analysis using computers and critical evaluation of technical policy literature. Special topics in econometrics also addressed. Original policy analytic paper required at end of sequence. Preq: BST 600 or higher. 
Prerequisites: BST 600 [Min Grade: C]

HCO 792. Advanced Topic in Health Disparities Research. 3 Hours.
This primary aim of this course is to engage students in critical thinking about the current paradigms for health care disparities research in the U.S.

HCO 793. DrPH Practicum. 3-6 Hours.
Doctoral students are required to complete a 6 hour practicum working in a public health agency or organization.

HCO 795. Directed Readings. 1-5 Hour.
The purpose of this course is to assist students in preparing literature reviews, manuscripts, or to complete other activities as deemed appropriate by the faculty member. Final objectives will be based upon the work between the student and advisor.

HCO 796. Doctoral Seminar. 1 Hour.
Doctoral students will be introduced to advanced topics in public health policy and practice, health services research methods and management research. In addition, topics directly related to doctoral studies (article critiques, literature reviews, manuscript preparation, dissertation protocol development, etc.) will be discussed.

HCO 797. Directed Readings. 3-9 Hours.
The primary aims of this seminar are to engage students in critical thinking about current issues in management research, public health policy and public health practice and to expose students to state-of-the-art methodological issues in health services research.

HCO 798. Doctoral Level Directed Research Health Care Organization and Policy. 3 Hours.
The purpose of this course is for students to develop dissertation research protocols that will be presented to their dissertation committee for final approval. Final objectives will be based upon the work between the student and advisor.

HCO 799. Dissertation Research HCOP. 3-9 Hours.
Research for dissertation under direction of dissertation committee. Must be advanced to candidacy. 
Prerequisites: GAC D

IH-International Health Courses

IH 600. Global Health: Principles and Practice. 3 Hours.
Global Health: Principles and Practice.

IH 601. Tropical and Infectious Diseases. 3 Hours.
Tropical and Infectious Diseases.

IH 603. Reproductive Health in Developing Countries. 3 Hours.
This course shall concentrate on those reproductive health concerns that fall within the childbearing years, are of major public health interest, and for which action and intervention are likely to bring about positive change. The course covers the key components of reproductive health including health pregnancy and safe motherhood, sexual health, fertility regulation, access to and the delivery of quality services, as well as methods for examining and improving reproductive health and care.

IH 608. Project Planning in International Health. 3 Hours.
This course is designed to equip students with skills in conceptualizing, developing, implementing, and evaluating small-scale projects in global health. Students will be guided through the process of identifying and investigating a global health problem, designing and implementing an intervention to solve the problem, and evaluating the impact of the intervention.

IH 609. Infectious Disease Surveillance and Control. 3 Hours.
Infectious Disease Surveillance and Control: Jamaican Field Studies.

IH 610. Environmental Hygiene in Developing Countries. 3 Hours.
Environmental Hygiene in Developing Countries.

IH 612. Nutrition in Developing Countries. 3 Hours.
Nutrition in Developing Countries.

IH 613. Nutrition Immunity and Infection. 3 Hours.
Nutrition Immunity and Infection.

IH 615. Seminar Series in Global Health. 1 Hour.
Seminar Series in Global Health.

IH 618. Public Health Demography. 3 Hours.
This courses teaches students how to use demographic data, methods, and perspectives to make sense of demographic developments and to solve practical problems, with an emphasis on public health. Students are introduced to the methods of demographic analysis, the principles of population dynamics, major demographic trends and patterns, their causes and consequences. In the process, students will develop competency in demography and an understanding of the health implications of major population issues in the contemporary world.

IH 621. HIV/AIDS and STDs. 3 Hours.
HIV/AIDS and STDs.

IH 650. Global Perspectives/Disease Prevention and Control. 6 Hours.

IH 651. Global Perspectives/Disease Prevention and Control. 6 Hours.
GLOBAL PERSPECTIVES/DISEASE PREVENTION and CONTROL.

IH 680. Gorgas Course in Tropical Medicine. 3-9 Hours.
Gorgas Course in Tropical Medicine.

IH 697. Internship. 3-9 Hours.
Preceptorship.
IH 698. Master s Level Directed Research. 1-9 Hour.
Master's level directed research.

Master's level research project.

IH 701. Tropical Infectious Diseases. 3 Hours.
Tropical and Infectious Diseases.

IH 703. Reproductive Health in Developing Countries. 3 Hours.
This course shall concentrate on those reproductive health concerns that fall within the childbearing years, are of major public health interest, and for which action and intervention are likely to bring about positive change. The course covers the key components of reproductive health including healthy pregnancy and safe motherhood, sexual health, fertility regulation, access to and the delivery of quality services, as well as methods for examining and improving reproductive health and care.

IH 710. Advanced Readings in International Health. 1-3 Hour.
Advanced Seminar in International Health.

IH 712. Nutrition in Developing Countries. 3 Hours.
Nutrition in developing countries.

IH 713. Nutrition Immunity and Infection. 3 Hours.
Nutrition immunity and infection.

IH 798. Doctoral Level Directed Research. 1-9 Hour.
Doctoral level directed research.

Dissertation Research.

Prerequisites: GAC A

LCPH - FLC in Public Health Courses

LCS-FLC in Social/Behavioral Courses

MCH-Maternal and Child Health Courses

MCH 600. Issues in Maternal and Child Health. 3 Hours.
Examination of current issues affecting the health of women through the childbearing years, children from infancy through adolescence, and family systems. A framework for the identification of needs, influences, and strategies are developed for analysis and problem solving.

MCH 602. Child Health and Development: Womb to Young Adulthood. 3 Hours.
Focus on the key developmental processes that influence health outcomes from the prenatal period through early childbearing years. Processes and outcomes will be linked to MCH programs, resources, and barriers relevant to these populations.

MCH 603. Reproductive Health in Developing Countries. 3 Hours.
Examines key areas of reproductive health including contraception and family planning, sexual health and sexually transmitted diseases, unwanted pregnancies, health pregnancy and safe motherhood, and adolescent reproductive health. Measurement, prevalence, determinants and consequences of reproductive health problems. Issues of survey design, research methods, and analysis. Development, implementation, and evaluation of reproductive health policies and services to low-to-middle income countries.

MCH 604. Principles of Public Health Surveillance. 3 Hours.
Introduction to principles and methods of public health surveillance as a fundamental epidemiologic activity for disease monitoring, prevention, and control. Emphasizes application of surveillance methods to problems in MCH. Note: Only open to graduate non-degree seeking students as space permits.

MCH 605. Basic Research Methods for Maternal and Child Health Practitioners. 3 Hours.
Course provides an introduction to basic research methods with a specific focus on their use in the field of Maternal and Child Health (MCH). The course purpose is to facilitate the development of knowledge and skills related to the review, assessment, and conduct of data-based research.

Facilitates development of knowledge and skills related to the use of a conceptual framework for evaluating community-oriented and community-based initiatives of projects of programs. Primary focus is on applying and integrating knowledge and skills in collaborative and participatory community evaluation. NOTE: In lieu of HB 641 or MCH 605, any public health core quantitative course or equivalent may be considered as a prerequisite.

Prerequisites: MCH 605 [Min Grade: C] or HB 641 [Min Grade: C]

MCH 607. Nutrition in Maternal Child Health. 3 Hours.
Major nutrition issues within each of the MCH life cycle stages will be presented and discussed, beginning with women's reproductive health including family planning and preconception risk reduction, and continuing through pregnancy, infancy, the preschool and childhood years, and adolescence. Nutritional needs of children with special health care problems will also be addressed.

MCH 608. Project Planning in International Health. 3 Hours.
Global health professionals require skills to identify and delineate problems that face communities in which they work, and the ways to solve them. Often, this requires them to conduct small-scale investigations of their own, either as managers working on specific health projects, or as consultants hired to provide technical expertise. To help students develop these skills, this course provides support for them to work through the process considering in depth, a specific health problem and formulating a scientifically valid and local relevant investigation around it. NOTE: Requires permission of instructor.

To introduce the needs assessment, program planning, and evaluation processes specifically related to public health and to provide practical educational experiences to develop skills in the range of activities needed to conduct needs assessments and use the information gathered to plan, direct, and evaluate public health programs and impact public health policies.

Prerequisites: MCH 600 [Min Grade: C]

MCH 610. Intro to Public Health. 3 Hours.
Introduction to public health as a profession and discipline which focuses on populations, population health and society's role in monitoring and achieving good health and quality of life. Among the greatest successes in public health in the 20th Century are those related to the improvements in health for women, infants and children. Using primary sources, this course will introduce public health to students by reviewing these achievements and presenting the various disciplines within public health that have collaborated to make the improvements possible. The importance of the appropriate use of data and the scientific method in problem solving for public health is also stressed.
MCH 612. International Children’s Rights & Social Justice: Global Perspectives. 3 Hours.
This course is designed to familiarize students with public health and legal issues with regard to children globally. The course will provide background on international law and international human rights law, and international treaties focused particularly on children, followed by the role of public health in achieving these rights and lessening the gap between theory and practice. NOTE: Only available to School of Public Health degree seeking students.

MCH 613. Child Day Care as Prevention and Intervention: A Developmental Perspective. 3 Hours.
To introduce students to basic principles of child development within a public health framework of reference using child care settings as exemplars of how these principles are applied in programs for children and their families.

MCH 614. Public Health Demography. 3 Hours.
Principles of demography (the study of population) as related to public health. The measurement and analysis of fertility, mortality, migration, population size, and composition. Sources and evaluation of demographic data, techniques of population projection. Determinants and consequences of population trends and processes, with applications for health and health care.

MCH 617. Global Health: Principles and Practice. 3 Hours.
This course introduces students to the historical perspective of public health in its global context, examines major policies and themes, and analyzes health problems and prevention priorities in different national contexts. The role of international health agencies is analyzed, including their successes and constraints. NOTE: Requires permission of instructor.

MCH 619. Social Work in Public Health. 3 Hours.
Introduction and overview of the field of public health and the subspecialty of public health social work. Provides practical macro-level skills and explores the role and functions of social workers within major public health programs. Note: Requires permission of instructor.

MCH 658. Readings in MCH. 1-3 Hour.
Critical analysis of literature in single area of maternal and child health under supervision of faculty member.

MCH 660. Fieldwork in Maternal and Child Health. 3 Hours.
Field experience under joint supervision of MCH faculty and agency professionals. Placements in MCH-related programs, and public and private health agencies. Prereq: Permission of advisor.

MCH 661. Extended Field Work in Maternal Child Health. 6 Hours.
Full time three-month placement in a Maternal and Child Health or related organization. Usually during the summer. Must complete 2 semesters of full-time course work before registering for this course. Permission of instructor.

MCH 670. Policy Design and Advocacy for Maternal and Child Health Professionals. 2 Hours.
Policy Design and Advocacy for Maternal and Child Health Professionals.

MCH 695. Public Health Integrative Exper. 3 Hours.
In addition to satisfying the MPH culminating experience requirement this course will provide an opportunity to integrate the knowledge and competencies from the MPH coursework. The course emphasizes the data-driven and applied nature of public health practice. The coursework will be problem-based and focused on a community health planning process and prevention of a health problem. Topical areas will be based on a student self-assessment of the achievement of the required competencies in each of the MPH core disciplines. Students will conduct systematic reviews of relevant literature, perform basic data analysis, and apply other planning and evaluation techniques for a specific global or US population.
Prerequisites: BST 600 [Min Grade: C] or (BST 611 [Min Grade: C] and BST 612 [Min Grade: C]) and ENH 600 [Min Grade: C] and (EPI 600 [Min Grade: C] or EPI 610 [Min Grade: C]) and HB 600 [Min Grade: C] and HCO 600 [Min Grade: C]

MCH 697. Internship. 3-9 Hours.
Field experience under joint direction of appropriate public health faculty member and qualified specialists working in selected aspects of public health.
Prerequisites: BST 600 [Min Grade: C] or (BST 611 [Min Grade: C] and BST 612 [Min Grade: C]) and ENH 600 [Min Grade: C] and EPI 600 [Min Grade: C] and HB 600 [Min Grade: C] and HCO 600 [Min Grade: C]

Research under the direction of faculty member.

MCH 702. Child Health and Development: Womb to Young Adulthood. 3 Hours.
Focus on the key developmental processes that influence health outcomes from the prenatal period through early childhood years. Processes and outcomes will be linked to MCH programs, resources, and barriers relevant to these populations.

MCH 703. Reproductive Health in Developing Countries. 3 Hours.
Examines key areas of reproductive health including contraception and family planning, sexual health and sexually transmitted diseases, unwanted pregnancies, health pregnancy and safe motherhood, and adolescent reproductive health. Measurement, prevalence, determinants and consequences of reproductive health problems. Issues of survey design, research methods, and analysis. Development, implementation, and evaluation of reproductive health policies and services to low- to middle-income countries.

MCH 707. Nutrition in Maternal and Child Health. 3 Hours.
Major nutrition issues within each of the MCH life cycle stages will be presented and discussed, beginning with women’s reproductive health including family planning and preconception risk reduction, and continuing through pregnancy, infancy, the preschool and childhood years, and adolescence. Nutritional needs of children with special health care problems will also be addressed.

MCH 710. Perinatal Epidemiology. 3 Hours.
Contemporary issues in perinatal epidemiology, identification of data sources, analysis and interpretation of data. Measurement, etiology, and prevention of infant mortality emphasized. NOTE: Requires permission of instructor.

MCH 711. Adolescent Sexuality. 3 Hours.
Comprehensive review of the causes and consequences of adolescent sexuality, pregnancy, and parenting. Demographics and time trends; relationship to other problem behaviors of adolescence. NOTE: Only advanced doctoral students (second year and above) can register; masters students must obtain permission of instructor.
MCH 712. Diversity and Cultural/Linguistic Competency Associated with Health Access, Utilization/Disparities. 3 Hours.
The purpose of this course is to facilitate the opportunity for students to learn about, research, and analyze information specific to the links between sociocultural, race/ethnicity and geographic diversity and indicators of health care access, utilization, and recognized disparities. This course will have an applied policy focus, emphasizing the link between information (data), policy development, and evidence/solution-based practice. NOTE: Permission of instructor required if course work indicated as prerequisites are not met.
Prerequisites: BST 600 [Min Grade: C] and ENH 600 [Min Grade: C] and EPI 600 [Min Grade: C] and HB 600 [Min Grade: C] and HCO 690 [Min Grade: C] and MCH 610 [Min Grade: C]

MCH 713. Child Day Care as Prevention and Intervention. 3 Hours.
Child daycare as prevention and intervention.

MCH 714. Secondary Data Analysis for Public Health Practitioners. 3 Hours.
To provide (1) and introduction to the analysis of secondary data related to the field of maternal and child health, (2) an opportunity for students to undertake an investigation of a research hypothesis using a secondary dataset, and (3) an introduction to evaluating the appropriateness of statistical analyses employed in published journal articles. Preq: MPH Core, MCH 605 or BST 619 and EPI 626/627 or BST 626/627 or permission of instructor.
Prerequisites: BST 600 [Min Grade: C]

MCH 720. Comparative Maternal and Child Health in Developing and Developed Nations. 3 Hours.
Health problems and solution strategies for mothers and children of third world. Comparisons drawn from developed countries illustrate successes and failures in MCH practices.

MCH 793. DrPH Practicum. 6 Hours.
Field experience course that bridges professional academic preparation and advanced public health practice. A final grade for the course will be awarded by the faculty practicum advisor and based upon the practicum mentor/-supervisor's evaluation and the student's final product.

MCH 795. Directed Readings for Doctoral Students in Maternal and Child Health. 1-3 Hour.
Critical analysis of literature in an area of maternal and child health. Student develops annotated bibliography and reports literature review. Student seminar presentation may be required.

MCH 796. Doctoral Seminar in MCH. 1 Hour.
Range of theoretical and practical research, programmatic, advocacy, service, and policy issues, and leadership.

MCH 797. Directed Readings for DrPH Comprehensive Exam in Maternal Child Health. 3 Hours.
Assists students in preparing for the comprehensive exam. Doctoral students may register in the quarter in which they prepare for and take their comprehensive exam.

MCH 798. Dissertation Protocol Development in Maternal and Child Health. 3 Hours.
Assists students with their dissertation protocol development. doctoral students may register for this course during the period in which they are preparing their doctoral dissertation protocol.

Research for dissertation under direction of dissertation committee. NOTE: Must be admitted to candidacy before registering for this course.
Prerequisites: GAC A

MCH-W-Maternal and Child Health Courses

MCHW 605. Basic Research Methods for Maternal and Child Health Practitioners. 3 Hours.
This course provides an introduction to basic research methods with a specific focus on their use in the field of Maternal and Child Health (MCH). The course purpose is to facilitate the development of knowledge and skills related to the review, assessment, and conduct of data-based research.

PUH-Public Health Courses

PUH 602. Narrative in Public Health. 3 Hours.
The purpose of this course is to develop communication skills primarily through written exercises directly relevant to public health. Each exercise will explore and teach students different formats and techniques for communicating complex public health information to different audiences, such as colleagues, the lay public, public officials, or potential future public health students. NOTE: This course is only available to Public Health degree-seeking students.

PUH 627. Writing & Reviewing Research for MPH Candidates. 3 Hours.
PUH 627 is a course that meets for ten three-hour sessions over the course of 10 weeks. Class time will be filled with discussion, group activities, tasks, writing, peer review, and presentations. By the end of this 10-week course, PUH 627 student writers will demonstrate a working grasp of academic research writing best practices, including ethics for authors, and gain knowledge and confidence as writers after completing weekly non-graded reading/writing activities, 3 rigorous graded writing assignments, and a final (a research proposal presentation) as measured by: 1) an average of grades on writing rubrics and 2) instructor evaluation.

PUH 627Q. Writing & Reviewing Research for MPH Candidates. 3 Hours.
PUH 627 is a course that meets for ten three-hour sessions over the course of 10 weeks. Class time will be filled with discussion, group activities, tasks, writing, peer review, and presentations. By the end of this 10-week course, PUH 627 student writers will demonstrate a working grasp of academic research writing best practices, including ethics for authors, and gain knowledge and confidence as writers after completing weekly non-graded reading/writing activities, 3 rigorous graded writing assignments, and a final (a research proposal presentation) as measured by: 1) an average of grades on writing rubrics and 2) instructor evaluation.

PUH 690. Special Topics in Public Health. 3 Hours.
This is a general course that may be used for special topic lectures or directed readings.

PUH 695. The Public Health Integrative Experience. 1 Hour.
This course is designed to fulfill the requirement that all Master of Public Health degree candidates have the opportunity as defined by CEPH on Public Health "to synthesize and integrate knowledge acquired in course work and other learning experiences to apply theory and principles in a situation that approximates some aspects of professional practice."
Prerequisites: BST 600 [Min Grade: C] or [BST 611 [Min Grade: C] and BST 612 [Min Grade: C]] and ENH 600 [Min Grade: C] and EPI 600 [Min Grade: C] or EPI 610 [Min Grade: C] and HB 600 [Min Grade: C] and HCO 600 [Min Grade: C]
PUH 695Q. The Public Health Integrative Experience Online. 1 Hour.
This course fulfills the requirement that all Master of Public Health degree candidates have the opportunity, as defined by the Council for Education on Public Health (CEPH), “to synthesize and integrate knowledge acquired in course work and other learning experiences and to apply theory and principles in a situation that approximates some aspect of professional practice”. All MPH students, regardless of program affiliation, must complete this course to graduate. This is an opportunity for you to demonstrate your knowledge. This course must be completed during the final term of enrollment.

PUH 697. Practice Placement / Internship. 1-9 Hour.
This course is for students in the MPH/MD and MPH/DVM programs. It will be used to satisfy the internship degree requirement.

PUH 697Q. Practice Placement / Internship. 3 Hours.
This course is for students in the school-wide dual degree programs. It will be used to satisfy the internship degree requirement.
Prerequisites: BST 601 [Min Grade: C] or (BST 611 [Min Grade: C] and BST 612 [Min Grade: C]) and ENH 600 [Min Grade: C] and EPI 600 [Min Grade: C] and HB 600 [Min Grade: C] and HCO 600 [Min Grade: C]