SUNY DOWNSTATE Medical Center

School of Public Health

Supplemental Student Handbook: 2012-2013

This Handbook is subject to change.

Dear Student:

Welcome to the School of Public Health and to SUNY Downstate Medical Center. The School of Public Health is accredited by the Council on Education for Public Health and the New York State Education Department.

T**he School of Public Health Student Handbook**, is provided to assist you with the resources available to guide you in your pursuit of your educational goals. The handbook is an information compendium concerning academic requirements for the School of Public Health Program. **Please note the Student Handbook contains only information pertinent to the School of Public Health degree(s).** For more complete details regarding SUNY Downstate Medical Center policies, student rights and responsibilities, and names, locations, and telephone numbers of campus services, please consult the **SUNY Downstate Medical Center Student Handbook**.

Please study the School of Public Health Student Handbook and the **SUNY Downstate Medical Center Student Handbook** thoroughly. Both student handbooks contain information and rules and regulations that pertain to this academic year only.

SUNY Downstate Medical Center reserves the right to alter the existing rules and regulations, and academic programs, as deemed necessary for the institution. SUNY Downstate Medical Center expressly reserves that right, whenever deemed advisable, to:

1. Change or modify its schedule of tuition and fees;
2. Withdraw, cancel, reschedule, or modify any course, program of study, degree, or any requirement or policy in connection with the foregoing, and,
3. Change or modify any academic or other policy.

Essential changes to information in this Student Handbook concerning new academic regulations, policies or programs will be published in newsletters or other University publications. It is the responsibility of each student to ascertain current information that pertains to the individual's program, particularly with regard to satisfaction of degree requirements by consultation with the student's advisor, the student's program, the School of Public Health Dean's Office, the Office of Student Affairs, the Office of the Registrar, and other offices as appropriate. In preparing this Student Handbook, efforts were made to provide pertinent and accurate information; however, SUNY Downstate Medical Center assumes no liability for School of Public Health Student Handbook errors or omissions.

If there is something in this Student Handbook that you do not understand or wish to have clarified, please schedule an appointment with a member of the administration in the Dean's office:
718-270-1065.

We hope your time with us will prove fulfilling and valuable.

Sincerely,

Pascal James Imperato, MD, MPH&TM
Dean and Distinguished Service Professor
School of Public Health

TABLE OF CONTENTS

SCHOOL OF PUBLIC HEALTH
MISSION STATEMENT, VISION AND GOALS

Mission Statement:
The mission of the SUNY Downstate School of Public Health is to advance public health knowledge, promote health and well-being, and prevent disease and disability within communities, particularly in urban and immigrant ones. Such actions are accomplished through excellence in the education of public health professionals, scientific investigation of public health issues, and service to communities through collaborative partnerships.

Vision Statement:
Grow the SUNY Downstate School of Public Health into a nationally recognized School of Public Health that is known for leadership in urban and immigrant health, fosters the development of new knowledge and public health practices, trains diverse public health professionals, and creates innovative models to empower communities to address health disparities.

Goals:

- To provide an academic environment for public health education, research, and practice in an urban setting with an emphasis on urban and immigrant health.

- To educate individuals through an academic program that prepares graduates to identify, address, and resolve public health issues and manage public health programs in diverse settings, especially urban environments with different racial, ethnic, cultural, religious, and socioeconomic groups.

- To advance public health knowledge through scientific investigation of health and disease, with a focus on urban and immigrant health issues.

- To disseminate and interpret research results to professionals, patients, individuals and their families, and the public.

- To advance the health of communities through collaborative public health approaches to health promotion and disease prevention and intervention.

SCHOOL OF PUBLIC HEALTH ADMINISTRATION

Pascal James Imperato, MD, MPH&TM Dean and Distinguished Service Professor	718-270-1056 B4-318
Judith H. LaRosa, PhD, RN Vice Dean for Academic and Student Affairs	718-270-3204 B4-302
Karen Benker, MD, MPH Associate Dean for Community Public Health Affairs	718-221-6194 B4-322
Florence Kavaler, MD, MS, MPH Associate Dean for Research Administration	718-804-7836 BSB 5-95A
Leslie Schechter, MA Assistant Dean for Administration	718-270-1766 B4-316A
Lucy Grassi, BBA Budget Director	718-270-1057 B4-322
Daniel Ilyayev, M.S. Ed. Director of Student Affairs	718-270-2759 B4-316B
Dorine Cooper, MA Executive Assistant	718-270-8377 B4-318
Lois Hahn Secretary	718-270-1056 B4-318
Evelyn Alleyne Staff Assistant	718-270-5191 B4-322

SCHOOL OF PUBLIC HEALTH DEPARTMENTS

Department of Health Policy and Management **Departmental Coordinator:** Francine Benjamin, MS	718-613-8780
Department of Environmental and Occupational Health Sciences **Departmental Coordinator:** Francine Benjamin, MS	718-613-8780
Department of Biostatistics and Epidemiology **Departmental Coordinator:** Arlene Mbonu, BA	718-613-8376
Department of Community Health Sciences **Departmental Coordinator:** Arlene Mbonu, BA	718-613-8376

SPH e-mail: publichealth@downstate.edu

In addition to consulting the School of Public Health Student Handbook, all School of Public Health (SPH) students, both single and concurrent degree, should consult the SUNY Downstate Medical Center Student Handbook for more detailed information regarding SUNY Downstate Medical Center Policies and Procedures.

CURRICULUM GOAL AND OBJECTIVES

The goal and objectives of the School of Public Health at SUNY Downstate are congruent with state-of-the-science public health programs across the country; and specifically address the issues in urban and immigrant health. The underlying premises though reflect the essentials that are public health no matter where it is practiced.

Goal

The goal of the SUNY Downstate SPH is to provide an academic environment for public health education, research, and practice, in an urban setting with an emphasis on immigrant health.

Objectives

1. To prepare graduates to identify, address, and resolve public health issues and manage public health programs in diverse settings, especially urban environments with different racial, ethnic, cultural, religious, and socioeconomic groups.
2. To prepare students to advance public health knowledge through scientific investigation of health and disease, with a focus on urban and immigrant health issues.
3. To prepare students to disseminate and interpret research results to professionals, patients, and the public.
4. To prepare students to advance the health of the communities through collaborative public health approaches to health promotion, disease prevention and intervention, particularly urban and immigrant health communities.

TEXTBOOK POLICY

The School of Public Health does not order textbooks in bulk from the SUNY Downstate bookstore, as the majority of students order them on-line. **Students are therefore, advised to order textbooks on-line or at their local bookstores.** A booklist will be made available to students on the SPH website sixty (60) days prior to the start of the semester to ensure that students have ample time to purchase textbooks prior to the start of the semester.

Textbooks will no longer be available for students to borrow from the SPH Office of Student Affairs.

However, a copy of each textbook will be available for students to borrow from the **Special Reserve section at the Medical Research Library (located at 395 Lenox Rd.)** during the following business hours:

Fall and Spring Terms:

Monday - Thursday: 8:30am - 12 midnight
Friday: 8:30am - 9pm
Saturday: 9am - 9pm
Sunday: 12 noon - 12 midnight

Summer Term:

Monday - Thursday: 8:30am - 12 midnight
Friday: 8:30am - 5pm
Saturday: 9am - 5pm
Sunday: 12 noon - 12 midnight

Textbooks on Special Reserve at the Library may not be taken out of the library.

CREDIT TRANSFER POLICY

MPH Program Transfer Credits

Please note that a maximum of twelve (12) credits from another CHEA regionally accredited college and/or university can be transferred into the MPH program. Transfer of credits for courses used towards the completion of a granted degree will not be considered. Courses taken at other CHEA accredited institutions must be approved by the departmental chair. **Courses used for previous degrees cannot be transferred.**

DrPH Program Transfer Credits

A maximum number fifteen (15) credits from another CHEA regionally accredited college and/or university can be transferred into the doctoral program. Courses used towards the completion of a granted degree will not be considered. However, some DrPH coursework may be waived if relevant doctoral level courses have been taken at another institution. A waiver or transfer of credits for course(s) taken at another accredited institution(s) must be approved by the departmental chair.

For transfer of credits or a waiver, the accepted student must provide: 1) a course description and 2) verification of at least a B grade (3.0 on a 4.0 system) in that particular course(s).

Credit transfers must be approved by the departmental chair. The student must furnish official, written proof of the course content equivalency. If the student fails to provide appropriate proof of course content equivalency in a timely fashion, the option for credit transfer may be denied.

MASTER OF PUBLIC HEALTH (MPH) ACADEMIC REQUIREMENTS

The Master of Public Health (MPH) program is designed to be completed in two years of full-time academic work, or up to four years of part-time academic work, including the Culminating Experience

A master's degree candidate must complete the proposed MPH program core requirements as well as the requirements of a track specialty within a department. Electives, which provide a further in-depth examination of selected issues, will complete the program requirements. Please note that all students are **strongly** advised to take the MPH core courses, followed by their respective track courses before taking elective courses.

For all students, the number of credits required for successful completion of the program is 42.

All students must complete a Culminating Experience that integrates theory and practice. The SUNY Downstate Medical Center School of Public Health is well situated to work with students to arrange a Culminating Experience through collaborative arrangements with an array of public and private hospitals, community-based organizations, and local, state, and federal agencies. Students are also encouraged to identify opportunities for a Culminating Experience.

MPH CORE REQUIREMENTS (18 CREDITS)

All students for an MPH degree, regardless of specialty, must complete 18 credits of MPH core requirements, 12 credits of the track specialty requirements, 9 credits of electives, and three (3) credits of the Culminating Experience. The MPH core requirements are listed below.

Course #	Course Title	Credits	Pre-requisite Courses
BIOS 5200	Principles of Biostatistics	3	None
CHSC 5200	Health Behavior and Risk Reduction	3	None
PUBH 5200	Introduction to Public Health	3	None
EOHS 5200	Issues in Environmental Health	3	None
EPID 5200	Principles of Epidemiology	3	None
HPMG 5206	Introduction to Health Policy and Management	3	None

MPH TRACK REQUIREMENTS BY DEPARTMENT

BIOSTATISTICS (BIOS) CORE REQUIREMENTS (12 CREDITS)

In addition to the MPH core requirements, all students for an MPH with a specialization in Biostatistics must complete the core requirements for the BIOS track.

Course #	Course Title	Credits	Pre-requisite Courses
BIOS 5201	Categorical Data Analysis	3	BIOS 5200, EPID 5200
BIOS 5202	Applied Regression Analysis	3	BIOS 5200, EPID 5200
BIOS 5203	Survival Analysis	3	BIOS 5200, EPID 5200
BIOS 5204	Statistical Computing	3	BIOS 5200, EPID 5200

ELECTIVES (9 CREDITS)

Students have a range of elective choices to complete the requirements for a BIOS MPH. All students must complete nine (9) elective credits. Please note that some electives require a prerequisite course. Electives are based on student interest with advisor approval.

Course #	Course Title	Credits	Pre-requisite Courses
BIOS 5300	Introduction to Sampling	3	BIOS 5200, EPID 5200
BIOS 5301	Survey Research Methods	3	BIOS 5200, EPID 5200, BIOS 5201, BIOS 5204, EPID 5201

BIOS 5302	Advanced Experimental Design	3	BIOS 5200, EPID 5200, BIOS 5201, BIOS 5202, BIOS 5204, EPID 5201
BIOS 5303	Nonparametric Statistics	3	BIOS 5200, EPID 5200, BIOS 5201, BIOS 5202, BIOS 5204, EPID 5201
BIOS 5304	Design And Analysis of Clinical Trials	3	BIOS 5200, EPID 5200, BIOS 5202
BIOS 5310	Independent Study	1-3	None

COMMUNITY HEALTH SCIENCES (CHSC) CORE REQUIREMENTS (12 CREDITS)

In addition to completing the MPH core requirements, all students for an MPH with a specialization in Urban and Immigrant Health must complete the core requirements for the CHSC Urban and Immigrant Health track. Electives are based on student interest with advisor approval

Course #	Course Title	Credits	Pre-requisite Courses
CHSC 5202	Issues in the Health of Immigrant Populations	3	
CHSC 5203	Sex, Gender, Race, and Ethnicity	3	
CHSC 5205	Urban Health Issues	3	
CHSC 5206	Planning, Program, and Evaluation	3	CHSC 5200

COMMUNITY HEALTH SCIENCES (CHSC) ELECTIVES (9 CREDITS)

Students have a range of elective choices to complete the requirements for a CHSC MPH. All students must complete nine (9) elective credits. Please note that some electives may require a prerequisite course. Electives are based on student interest with advisor approval.

Course #	Course Title	Credits	Pre-requisite Courses
CHSC 5203	Sex, Gender, Race, and Ethnicity	3	None
CHSC 5204	Community Organization	3	None
CHSC 5206	Planning, Program, and Evaluation	3	CHSC 5200
CHSC 5300	Epidemiologic Research Methods	3	None
CHSC 5301	Human Sexual Behavior	3	None
CHSC 5302	Social Marketing	3	None
CHSC 5303	Issues in HIV Prevention	3	None
CHSC 5304	Planning Pediatric and Adolescent Interventions	3	None
CHSC 5305	Issues in Adolescent Health	3	None
CHSC 5306	Psychosocial and Behavioral Epidemiology	3	BIOS 5200, EPID 5200, CHSC 5200
CHSC 5307	Early Child Development: A Public Health Perspective	3	None
CHSC 5308	Public Health Preparedness and Response to Emergencies	3	None
CHSC 5309	Introduction to Global Public Health	1-3	None
CHSC 5310	Independent Study	1-3	None
CHSC 5311	Public Health Practice	3	None
CHSC 6020	Field Experience in Maternal and Child Health	1-3	None

ENVIRONMENT AND OCCUPATIONAL HEALTH SCIENCES (EOHS) CORE REQUIREMENTS (12 CREDITS)

In addition to the MPH core requirements, all students for an MPH with a specialization in Environment and Occupational Health Sciences must complete the following core requirements for the EOHS track.

Course #	Course Title	Credits	Pre-requisite Courses
EOHS 5201	Introduction to Management, Policy and Law		None
EOHS 5202	Occupational Health	3	None
EOHS 5203	Built Environment & Public Health	3	None
EOHS 5205	Public Health Aspects of Physical Trauma	3	None

ENVIRONMENT AND OCCUPATIONAL HEALTH SCIENCES (EOHS) ELECTIVES (9 CREDITS)

Students have a range of elective choices to complete the requirements for a BIOS MPH. All students must complete nine (9) elective credits. Please note that some electives require a prerequisite course. . Electives are based on student interest with advisor approval.

Course #	Course Title	Credits	Pre-requisite Courses
EOHS 5302	Women's Health Policy: Epidemiology and the Environment	3	EOHS 5200
EOHS 5304	Case Studies in Environmental Health	3	EOHS 5200
EOHS 5306	Risk Assessment and Communication	3	EOHS 5200
EOHS 5307	Occupational & Environmental Epidemiology	3	EOHS 5200, BIOS 5200, EPID 5200
EOHS 5308	Environmental and Occupational Toxicology	3	
EOHS 5310	Independent Study	1-3	None

EPIDEMIOLOGY (EPID) CORE REQUIREMENTS (12 CREDITS)

In addition to the MPH core requirements, all students for an MPH with a specialization in Epidemiology must complete the following core requirements for the EPID track.

Course #	Course Title	Credits	Pre-requisite Courses
EPID 5201	Epidemiologic Research Methods	3	BIOS 5200, EPID 5200
EPID 5202	Infectious Disease Epidemiology	3	BIOS 5200, EPID 5200
EPID 5203	Chronic Disease Epidemiology	3	BIOS 5200, EPID 5200
EPID 5205	Epidemiologic Research Methods II	3	BIOS 5200, EPID 5200, EPID 5201

EPIDEMIOLOGY (EPID) ELECTIVES (9 CREDITS)

Students have a range of elective choices to complete the requirements for a EPID MPH. All students must complete nine (9) elective credits. Please note that some electives require a prerequisite course. . Electives are based on student interest with advisor approval.

Course #	Course Title	Credits	Pre-requisite Courses
EPID 5300	Cancer Epidemiology	3	BIOS 5200, EPID 5200
EPID 5301	Reproductive Epidemiology	3	BIOS 5200, EPID 5200
EPID 5302	Epidemiology of HIV/AIDS	3	BIOS 5200, EPID 5200
EPID 5303	Nutritional Epidemiology	3	BIOS 5200, EPID 5200
EPID 5304	GIS and Public Health	3	BIOS 5200, EPID 5200
EPID 5305	Epidemiology of Aging	3	BIOS 5200, EPID 5200
EPID 5306	Advanced Spatial Analysis	3	BIOS 5200, EPID 5200, EPID 5304
EPID 5307	Critical Approaches to the Epidemiologic Literature	3	BIOS 5200, EPID 5200, EPID 5201, EPID 5205
EPID 5310	Independent Study	1-3	None

HEALTH POLICY AND MANAGEMENT (HPMG) CORE REQUIREMENTS (12 CREDITS)

In addition to the MPH core requirements, all students for an MPH with a specialization in Health Policy and Management must complete the following core requirements for the HPMG track.

Course #	Course Title	Credits	Pre-requisite Courses
HPMG 5202	Health Care Advocacy and Politics	3	None
HPMG 5203	Health Management Concepts	3	None
HPMG 5204	Access, Cost and Quality of Care	3	None
HPMG 5207	Principles in Hospital Management	3	None

HEALTH POLICY AND MANAGEMENT (HPMG) ELECTIVES (9 CREDITS)

Students have a range of elective choices to complete the requirements for a HPMG MPH. All students must complete nine (9) elective credits. Please note that some electives require a prerequisite course. . Electives are based on student interest with advisor approval.

Course #	Course Title	Credits	Pre-requisite Courses
HPMG 5201	Health Policy in the Delivery System	3	HPMG 5206
HPMG 5300	Health Care Finance	3	HPMG 5206
HPMG 5302	Pharmaceuticals and the Health Care System	3	HPMG 5206
HPMG 5305	Organizational Change in Health Care	3	HPMG 5206, HPMG 5203
HPMG 5306	Policy Studies in urban and immigrant health	3	None
HPMG 5307	Global Issues in Maternal and Child Health Policy	3	None
HPMH 5310	Independent Study	1-3	None

FIELD EXPERIENCE AND THE CULMINATING EXPERIENCE:

Course #	Course Title	Credits	Pre-requisite Courses
PUBH 6500	MPH Field Experience	1	All CORE and TRACK courses must be completed.
PUBH 6001	MPH Culminating Experience	2	All CORE and TRACK courses must be completed.

MPH COURSE DESCRIPTIONS

REQUIRED MPH CORE COURSES (18 credits)

BIOS 5200: Principles of Biostatistics (3)
Introduction to statistical methods in public health. The course will cover descriptive statistics, probability concepts, and estimation of parameters, hypothesis testing, simple linear regression, correlation, and analysis of attribute data.

CHSC 5200: Health Behavior and Risk Reduction (3)
An introduction to the concepts, theories, and status of research in health promotion and disease prevention, with an emphasis on methods employed to modify group and individual health-related behaviors. This course examines methods of ascertaining health behaviors, the design and interpretation of behavioral intervention programs to modify behaviors, and current trends in the study of how lifestyle and preventive health practices impact on public health.

PUBH 5200: Introduction to Public Health (3)
Introduction to the broad concepts of public health practice including the mission, core functions, structure, policy role, program activities, and collaborative endeavors of public health agencies. Theoretical and practical perspectives are studied to illustrate contemporary strategies for health promotion and disease prevention at local, state, and national levels.

EOHS 5200: Issues in Environmental Health (3)
Major environmental health issues. The course addresses public health issues in the management of water quality, wastewater, occupational health, trace elements, municipal and hazardous waste, vector control and air quality.

EPID 5200: Principles of Epidemiology (3)
This course offers an introduction to the principles, concepts, and methods of epidemiologic research. Topics include the calculation, interpretation and application of measures of disease frequency, association and public health impact; epidemiologic study design and analysis (including the role of chance, bias and confounding); direct standardization of rates, statistical inference and principles of screening. This course also teaches students how to apply epidemiologic methods to critically analyze and interpret public health literature.

HPMG 5206: Introduction to Health Policy and Management (3)
This course uses a multi-disciplinary approach to policy and management in both the healthcare and the public health systems. Students will learn the organization, financing, and delivery of services within these systems as well as their legal and ethical bases. Students will also develop skills in program planning, development, budgeting, and evaluation; in strategic planning; in ensuring community health safety and preparedness; and in quality improvement initiatives. A central theme of the course is the accessibility and outcomes of care for urban and immigrant populations.

REQUIRED MPH TRACK CORE COURSES (12 credits)

BIOSTATISTICS CORE REQUIREMENTS
BIOS 5201: Categorical Data Analysis (3)
This course covers analytical techniques involved in the analysis of studies where subjects have been cross-classified by two or more categorical variables. Special emphasis will be on problems related to epidemiology, public health and medicine. Topics will include: significance versus magnitude of association; estimation of relative risk; matching cases and controls; effects, measurement, and control of misclassification errors; combining evidence from many studies; and logistic regression. Students will be introduced to the SPSS statistical package for the topics covered in the course.
Prerequisite: BIOS 5200, EPID 5200.

BIOS 5202: Applied Regression Analysis (3)
This course emphasizes the concepts and applications of building and evaluating regression models for public health studies. It covers simple and multiple linear regression models, including polynomial regression and analysis of variance (ANOVA) and co-variance (ANCOVA) for design of experiments as special cases. Binary regression including logistic regression and application to case-control studies will be discussed. In addition, loglinear models for count data will be covered.
Prerequisites: BIOS 5200, EPID 5200, BIOS 5201.

BIOS 5203: Survival Analysis (3)
This course covers the basic theoretical aspects and applications of various models to analyze "time to event" data. Basic concepts such as the survival function, hazard function, left and right hand censoring, and common parametric models for analyzing survival data will be covered. The proportional hazards (PH) model with fixed and time dependent covariates, the stratified PH model, regression diagnostics for survival models, additive hazards regression models and multivariate survival models will also be covered.
Prerequisites: BIOS 5200, EPID 5200, BIOS 5204.

BIOS 5204: Statistical Computing (3)
This course will give students a working knowledge of two statistical analysis software packages, SAS and SPSS. Emphasis will be placed on the basics of data management of files, data manipulation, basic data display, graphical display of data and statistical analysis. Although the Windows environment will be discussed, emphasis will be placed on the writing of program code.
Prerequisites: BIOS 5200, EPID 5200.

BIOSTATISTICS ELECTIVE COURSES (9 credits)
Students will work with their advisors to select 3 electives. Electives may be selected from any tracks.

BIOS 5300: Introduction to Sampling (3)
This course presents practical sampling methods and their theoretical background. It covers simple random, stratified, systematic, and simple stage cluster sampling techniques. In addition, ratio, regression, and difference estimation will be covered. An emphasis will be placed on sampling human populations in large communities.
Prerequisites: BIOS 5200, EPID 5200.

BIOS 5301: Survey Research Methods (3)
This course provides an introduction to the design, analysis, and interpretation of sample surveys. Types of sampling covered will include simple random sampling, stratified random sampling, systematic sampling, cluster sampling, and multi-stage sampling. Methods of estimation are described to estimate means, totals, ratios, and proportions. Development of sampling designs combining a variety of types of sampling and methods of estimation, and detailed description of sample size determinations to achieve goals of desired precision at least cost will be covered.
Prerequisites: BIOS 5200, EPID 5200, BIOS 5201, BIOS 5204, EPID 5201.

BIOS 5302: Advanced Experimental Design (3)
This intermediate course covers a broad perspective of experimental designs covered in public health, including various ANOVA designs, case-cohort studies, case-crossover studies, cross sectional studies, prospective and retrospective cohort studies, randomized clinical trials and meta analysis. The advantage and disadvantages of the various studies are discussed and emphasis is placed on selection of the appropriate study, sample size estimation and controlling for sources of bias and reduction of variability.
Prerequisites: BIOS 5200, EPID 5200, BIOS 5201, BIOS 5202, BIOS 5204, EPID 5201.

BIOS 5303: Nonparametric Statistics (3)
This course covers a survey of topics related to distribution-free approaches to statistical inference. Topics will include: Fisher's method of randomization; distribution free test procedures for means, variances, correlations, and trends; and rank tests. Relative efficiency, asymptotic relative efficiency and normal-score procedures will be covered. Binomial and hypergeometric distributions are covered to develop a variety of test and interval estimation procedures.
Prerequisites: BIOS 5200, EPID 5200, BIOS 5201, BIOS 5202, BIOS 5204, EPID 5201.

BIOS 5304: Design and Analysis of Clinical Trials (3)
This course covers fundamental concepts in the design and conduct of modern clinical trials. Topics include: sample size and power, reliability of measurement, the parallel-groups design, factorial designs, blocking, stratification, analysis of covariance, the crossover study, latin squares.
Prerequisites: BIOS 5200, EPID 5200, BIOS 5202.

BIOS 5310: Independent Study (1-3)
Independent study courses focus on a particular issue or set of issues related to a particular topic in public health. An Independent Study Program consists of assignments, research papers, clinical experiences and presentations submitted for academic credit. The student works closely with the professor(s) to determine the study focus and requirements.

COMMUNITY HEALTH SCIENCES (URBAN & IMMIGRANT HEALTH)
TRACK CORE COURSES (12 credits)

CHSC 5202: Issues in the Health of Immigrant Populations (3)
Emigration from another country can have important effects on the health of the émigré. The demographic, scientific, clinical, economic, social, political, ethical, and legal factors of the country of origin interact with those of the new country.
They are manifest in different ways in the health of immigrants – new and old. This course will consider these and other related public health issues across the lifespan.

CHSC 5203: Sex, Gender, Race, and Ethnicity in Health (3)
The health and well being of human beings have been under intense scrutiny and involved important changes during the 20th century. Gender and racial/ethnic inequities are being addressed and gaps in knowledge narrowing. These changes involve multiple factors. This course considers many of those factors as they interact with demographic, scientific, clinical, economic, social, political, ethical, and legal issues.

CHSC 5205: Urban Health Issues (3)
The goal of this course is to prepare public health professionals to analyze and intervene in urban health issues. The course explores the health of urban populations around the world, with a special focus on New York City, from historical, economic, social, spatial, and medical perspectives. Key concepts include social capital, social cohesion, social hierarchies, social networks, public health infrastructure, healthy neighborhoods, health disparities, globalization, and micro-geographic analysis. Each semester the class will explore three health topics in depth and will organize a neighborhood mini-conference on one of these topics in collaboration with local stakeholders. In addition, each student will perform weekly analyses of his/her neighborhood of residence and periodic analyses of the neighborhood surrounding SUNY-Downstate.

CHSC 5206: Program, Planning and Evaluation (3)
Community-based programs that are designed to change health-related behaviors comprise the vast majority of the public health efforts to reduce the morbidity and mortality in populations. This course covers the life stage of community-based programs from inception, implementation, and sustainability. The course applies the theoretical concepts from the social and behavioral sciences, health education, and health communication to the planning, design, and evaluation of community-based interventions. A program-planning framework provides the methodology to examine social and behavioral determinants of

health and to identify appropriate intervention and evaluation design. Characteristics of theory-based interventions are discussed, critiqued, and assessed for relevance to the needs of the students who will have the opportunity to apply these ideas to their own work.

Prerequisites: CHSC 5200.

COMMUNITY HEALTH SCIENCES (URBAN & IMMIGRANT HEALTH)
ELECTIVE COURSES (9 credits):

Students will work with their advisors to select 3 electives. At least one of these electives will be selected from the Community Health Sciences Track; the others may be selected from other tracks.

CHSC 5204: Community Organization (3)

Emphasis on community organizations as a major interventional approach to community dynamics, social change, and community participation in addressing health problems. The course explores methods for identifying and analyzing community health problems and their causes.

CHSC 5300: Introduction to Research (3)

Basics for participating in the development, implementation, and evaluation of research studies in public health, particularly health-care delivery. Each student will be expected to develop and present a research proposal.

Prerequisites: BIOS 5200, EPID 5200.

CHSC 5301: Human Sexual Behavior (3)

Focus on aspects of human sexual behavior from a psychosocial and behavioral perspective. A brief review of human anatomy and physiology as well as developmental abnormalities will be considered. The purpose is to educate health professionals about the strong influences of sexuality in all its facets.

CHSC 5302: Social Marketing (3)

Social marketing is a key ingredient in strategies to develop, implement, and evaluate health communication and education programs. This course will focus on developing and presenting a social marketing plan addressing a specific public health issue among a specific racial or ethnic group.

CHSC 5303: Issues in HIV Prevention (3)

Different facets of HIV prevention including the risk factors and the impact of social, economic, racial/ethnic, cultural, and religious factors on the development of the disease. Studies focusing on different communities at high risk for the disease will be studied.

CHSC 5304: Planning Pediatric Interventions (3)

This course will require systems thinking in terms of how individuals, social networks, communities and organizations interact and affect the public health on a local, state, national and international level. This course will challenge you to identify the specific pediatric health issues affecting a local community, prioritize them, outline interventions and describe evaluation techniques for assessing the effectiveness of the interventions. The course will be interactive and encourages discussion of unique and diverse approaches to both new and long-standing problems affecting the pediatric population in this area. This course will focus on practical application and real-life scenarios. Although pediatric health issues will be the focus, the principles learned should be applicable to health concerns of other populations.

CHSC 5305: Issues in Adolescent Health (3)

The myriad factors that influence adolescent development are considered juxtaposed against societal and public health issues. This course provides the student with an opportunity to enhance knowledge regarding this period of human development.

CHSC 5306: Psychosocial and Behavioral Epidemiology (3)

This course provides an introduction to the social, psychological, and behavioral issues that influence patterns of health and health care delivery. The focus is on the integration of the biomedical, social,

psychological, and behavioral factors that must be taken into consideration when public health initiatives are developed and implemented. The course is based on ecological theories of influences on health behavior. The course also includes the application of epidemiologic methods to the study of social, psychological, and behavioral influences on health, disease, and recovery/mortality.
Prerequisites: BIOS 5200, EPID 5200, CHSC 5200.

CHSC 5307: Early Child Development: A Public Health Perspective (3)
This course introduces students to early child development, the conditions which shape it, and how developmental and learning problems arising in early childhood (here collectively termed "developmental disorders" - DD) are identified and addressed at an individual and a population level.
The focus of the course will be on preventive and treatment interventions for DD's based in the home, community programs, and health care settings in the United States and internationally. Through field visits and presentations, the students will become familiar with how such interventions are conducted, and the role of different stakeholders (families, public health programs, NGO's, health care providers, school systems) in planning, funding, running and evaluating them. During the course, students will gain experience in doing basic developmental screenings, assessing the home caregiving environment, planning interventions and preparing and presenting messages about early child development for families.

CHSC 5308: Public Health Preparedness and Response to Emergencies (3)
This course investigates the role of public health professionals in planning and responding to "all hazards" emergencies that stress the public health and healthcare system. Topics will include: public health law; federal funding programs for preparedness and response; incident management system; training and exercises development; chemical, biological, radiological, nuclear and explosive events; hazard vulnerability analysis; and the psychosocial impact of disasters. The course will be problem based and explore current topics such as H1N1, structural collapses, coastal storms, etc. A part of the course will also focus on recovery and long term impacts (psychosocial, environmental, health effects, etc.). Students will use actual emergency management planning tools and templates from the federal government, supporting agencies and NYC, as well as journal articles.
Prerequisites: CHSC 5200.

CHSC 5309: Introduction to Global Public Health (3)
Introduction to Global Public Health through discussion of global public health issues in different geo-political settings, of health dynamics and their impact on global health, and the role of public health in implementing interventions.

Students will realize the basic principles of Global Public Health through their direct application to three different country scenarios: 1. Earthquake response, 2. Refugee crisis, and 3. Non-crisis foreign healthcare system.

At the completion of the course students will show a basic understanding of global health terminology, critical global health issues, global health care disparities, important global public health stakeholders, and the role of public health in the global context.

CHSC 5310: Independent Study (3)
Independent study courses focus on a particular issue or set of issues related to a particular topic in public health. An Independent Study Program consists of assignments, research papers, clinical experiences and presentations submitted for academic credit. The student works closely with the professor(s) to determine the study focus and requirements.

CHSC 5311: Public Health Practice (3)
This course will provide students with an in-depth understanding of the scope of the public health field and a practical foundation for future career opportunities. Students will become familiar with the evolution of public health as a field, including past achievements as well as current issues and future directions. The course will emphasize the core functions of public health and describe how these

functions relate to communities, the role of government, public health agencies and professionals. This course will feature presentations from experts in the field when appropriate.

CHSC 6020: Field Experience in Maternal and Child Health (1-3)
The overall goal of the course is to give the student experience in applying maternal and child health knowledge and skills in an off-campus public health setting. The experience is a planned, supervised, and evaluated internship that takes place in one of a variety of agencies or organizations, including community-based organizations and governmental departments.

ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES
REQUIRED TRACK CORE COURSES (12 credits)

EOHS 5201: Introduction to Management, Policy and Law (3)
An overview of the history and current application of laws and rules used to protect the environment. This course is oriented towards United States federal legislation, as well as examples from New York State law. The evolution of specific acts including Resource Conservation and Recovery Act (RCRA), the Clean Air Act (CAA) and Clean Water Act (CWA), the Toxic Substances Control Act (TSCA) and the Occupational Safety and Health Act (OSHA) will be covered. International environmental health laws, including Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), the European toxic substances control initiative, will be included. Emphasis will be placed on viewing environmental and occupational health law from an environmental justice perspective and examining the role of equity in environmental planning, policy-making, decision-making and in the distribution of environmental burdens and benefits.

EOHS 5202: Occupational Health (3)
Surveys the history of occupational health, the continuum from exposure to disease, the hierarchy of controls in the workplace, occupational health hazards, legal and regulatory issues, provision of occupational health services, and methods in comprehensive workplace health improvement.

EOHS 5203: Built Environment & Public Health (3)
Explores basic concepts of toxicology as applied to environmental toxicants including the distribution, metabolism, and elimination of environmental chemicals in the body. Examines the application of these concepts to the understanding of disease processes resulting from adverse environmental exposures.

EOHS 5205: Public Health Aspects of Physical Trauma (3)
Examination of injury and violence as seen in urban settings. The course is designed to incorporate models into practical application in communities using case examples.

ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES ELECTIVES (9 credits)
Students will work with their advisors to select 3 electives. At least one of these electives will be selected from the Environmental Health Track; the others may be selected from other tracks.

EOHS 5301: Principles of Industrial Hygiene (3)
Introduces concepts, terminology and methodology involved in the practe of industrial hygiene. Includes the recognition, evaluation and control of biological, chemical and physical exposures in the workplace. Includes lectures, problems and a site walk-through survey

EOHS 5302: Women's Health Policy: Epidemiology and the Environment (3)
This course will identify key indicators of women's health and women's health needs utilizing both environmental health sciences and health policy perspectives. Current and historical examples will highlight how health. Needs, medical practice and policies have evolved over time.
Prerequisites: EOHS 5200.

EOHS 5304: Case Studies in Environmental Health (3)
In this course students will review a series of case studies that illustrate core concepts of environmental health science including hazard identification, toxicology, exposure assessment, epidemiology, and risk assessment, communication and policy.
Prerequisites: EOHS 5200.

EOHS 5305: Principals of Food Safety (3)
Food is an important mainstay of good health and promotion of wellness. There is an expectation that food purchased for home preparation and consumption and in restaurants, outdoor stands and catering halls may be safely eaten with no potential to cause harm. Substantial public health resources are devoted to assure that the food chain from American and imported venues are free from pathogens and toxic chemicals. There are strict governmental standards and mandates and delegated responsibility for enforcement. Food borne illness has severe economic costs and consequences for those affected and for those responsible. Epidemiologic investigations and root cause analysis provide evidence for corrective actions and deterrence to continue to provide a safe table. Lectures, film, class discussion, debates and assignments will be utilized to more fully understand the scope of problems and solutions to assure food safety.
Prerequisites: EOHS 5200.

EOHS 5306: Risk Assessment and Communication (3)
This course provides an overview of current topics and controversies in occupational and environmental epidemiology. It will provide the student with familiarity with research techniques in this area, and capacity to evaluate current research relevant to public health practice and policy. The course is structured as a seminar, with discussion of research topics and techniques based upon analysis of published papers in the field, both historical and current. Guidance will be provided and students will be expected to produce increasingly sophisticated critiques of research as the course progresses.
Prerequisites: EOHS 5200.

EOHS 5308: Environmental and Occupational Toxicology
This course introduces the basic concepts of toxicology and their extension to occupational and environmental settings, in order to understand the effects of chemical exposures on populations. Concepts discussed include toxicokinetics and metabolism, dose-response relationships, molecular, cellular and organ responses to toxic chemicals, principles of testing for toxic effects, and factors that increase susceptibility to toxic insult. The course will focus on chemicals and metals found in the workplace setting and the environment, including organic solvents, metals, and pesticides. The course assumes knowledge of college-level chemistry and biology. A background in college organic chemistry and either the introductory SPH Environmental Health or COM Pharmacology course are recommended, though not required.

EOHS 5310: Independent Study (1-3)
Independent study courses focus on a particular issue or set of issues related to a particular topic in public health. An Independent Study Program consists of assignments, research papers, clinical experiences and presentations submitted for academic credit. The student works closely with the professor(s) to determine the study focus and requirements.
Prerequisites: EOHS 5200.

EPIDEMIOLOGY REQUIRED TRACK CORE COURSES (12 credits)

EPID 5201: Epidemiologic Research Methods (3)
This course introduces concepts of study design, data management and data analysis that are suitable for epidemiologic research. This course will enable students to design studies and write competitive proposals on contemporary issues in epidemiology and public health affecting immigrant and urban populations. Students will be provided with the practical skills necessary to plan and carry out research projects. Specifically, learners will explore principles and concepts associated with the design of sample surveys that are representative of populations and the analysis of data from such surveys. Throughout the

course, students will be asked to prepare comprehensive, concise written reports for a variety of audiences.

Prerequisites: BIOS 5200, EPID 5200.

EPID 5202: Infectious Disease Epidemiology (3)
This course provides students with a multidisciplinary framework for understanding the principles of interventions against infectious diseases. The course also provides knowledge and understanding of disease agents in the context of their routes of transmission and examines the reasons for successes, partial successes and failures of interventions, taking into account the social, political and economic contexts in which health systems operate. Specific topics related to the epidemiology of communicable diseases include: basic concepts and methods; epidemiologic aspects of vaccination; surveillance and outbreak investigation and the control of communicable disease in countries with a developed public health infrastructure.

Prerequisites: BIOS 5200, EPID 5200.

EPID 5203: Chronic Disease Epidemiology (3)
This course explores the burden of chronic non-communicable diseases (CNCDs) in NY. Using a variety of sources of data (e.g. US Census data, NYS Cancer Registry and Community Health Survey) relevant to immigrant and urban populations in NY, this course will review the epidemiology of obesity, cardiovascular diseases (hypertension, stroke, coronary artery disease) and diabetes and cancer. This course also reviews the methodological issues in different types of study designs aimed at identifying the determinants of major CNCDs, and teaches students how plan successful preventive strategies.

Prerequisites: BIOS 5200, EPID 5200.

EPID 5205: Epidemiologic Research Methods II (3)
This course is the culmination of the principles of epidemiology methodology. It follows the introduction to epidemiologic concepts in EPID 5200 and the intermediate methods covered in EPID 5201. This course is comprised of two distinct sections. The first half focuses on concepts of causality, by examining both the philosophical underpinnings and the statistical and logical applications of associative inference. Major concepts given in-depth coverage include the following: the comparison of and contrast between measures of effect and measures of association; confounding, effect modification and bias, with an emphasis on the tools applied in their measurement and assessment; the purpose of randomization. The second half of the course focuses on the practical implementation of various modeling strategies to measure the association between an exposure and outcome while simultaneously addressing confounding, effect modification and biases. Outcomes commonly encountered in epidemiology will be explored, and therefore will demonstrate the application of linear, logistic and Poisson regression techniques. The use of propensity score models for unmeasured confounding will also be considered. The modeling mechanics of each technique will be taught, but always with an emphasis on each technique's strengths and limitations and its overall relevance to causality and inference. Moreover, these specific regression techniques are located in a broader general approach to the analysis of an exposure-outcome association, which applies formal univariate and bivariate association techniques prior to the application of multivariable methods. As such, the student will obtain a thorough understanding of causal interpretation of exposure-outcome associations by developing a strict step-by-step approach to epidemiologic analyses.

Prerequisites: BIOS 5200, EPID 5200, EPID 5201.

EPIDEMIOLOGY ELECTIVE COURSES (9 credits):
Students must select 2 epidemiology elective courses from the list below. Students meet with advisors to select 1 other elective course to enhance the student's breadth of knowledge.

EPID 5300: Cancer Epidemiology (3)
This course reviews principles and methods used in the investigation of cancer incidence and mortality. Basic concepts of cancer biology and the role of environmental determinants (e.g. tobacco, alcohol, radiation, chemicals, stress, and nutrition) and genetic susceptibility will be reviewed. Using data from

the NYS Cancer Registry, we will examine the sociodemographic magnitude of cancer in Brooklyn, and discuss factors influencing cancer prevention and control efforts.
Prerequisites: BIOS 5200, EPID 5200.

EPID 5301: Reproductive Epidemiology (3)
This course explores the nature and determinants of ill-health in pregnant women and babies, and to demonstrate the contribution of epidemiologic methods to problem identification and to the design and evaluation of strategies to improve maternal and child health. Topics of discussion include disparities between various population groups, contraception, menstruation, fertility, abortion, menopause, and maternal morbidity and mortality. Discussion of contemporary issues in safe motherhood and perinatal health in developing countries will also be provided throughout the course.
Prerequisites: BIOS 5200, EPID 5200.

EPID 5302: Epidemiology of HIV/AIDS
This course represents a detailed model of how to tackle the epidemiological and public health aspects of a viral infection; it provides information on different routes of transmission, worldwide temporal changes in infection rate and persons at risk, historical interventions to control the diffusion of the infection along with their success rate. The course also provides knowledge and understanding of the infection versus the clinical manifestation of the disease.
Specific topics include: epidemiologic aspects of new treatments of the infection, surveillance of infection and disease trends, prevention strategies, changes in laboratory methods for virus detection and diagnosis and their impact on disease surveillance.
Prerequisites: BIOS 5200, EPID 5200.

EPID 5303: Nutritional Epidemiology (3)
This course applies epidemiologic methods and principles to current studies of diet, nutrition and chronic disease. Students will gain expertise in understanding the current state of knowledge on the relationship between nutrition and disease including the role of co-factors. Strengths and weaknesses of the methods available to assess exposure in nutritional epidemiologic studies will be presented as students will be asked to critically evaluate epidemiologic evidence on diet-disease relationships. Other topics to be covered include: evaluation of methods to prevent nutrition-related diseases through strategies aimed at promoting population based dietary change, identification, summarization and interpretation of a range of materials relevant to the specification of priority nutrition problems in a given population; discussion of the constraints involved in program implementation; presentation of a proposal for a nutrition intervention orally and in summary written form.
Prerequisites: BIOS 5200, EPID 5200.

EPID 5304: GIS and Public Health (3)
This course is an introduction to the concepts of Geographic Information Systems as they apply to public health. It is an intermediate level graduate course in the application of methods for displaying, describing and analyzing spatial environmental exposure and disease data and a doctoral level course for students in any field with an interest in the application of spatial methods to exposure data and disease data. Students in environmental health, epidemiology, and biostatistics are particularly encouraged to participate. Masters students with the appropriate background may enroll with the instructor's permission. The course will focus primarily on the spatial distribution of risk factors for disease outcomes, but the principles discussed can be broadly applied. All students must be thoroughly computer literate; know Excel and feel comfortable working in a multi-windowed environment.
Attendees will learn the general concepts of GIS, and the particular applications of this technology to public health. They will also acquire hands-on experience using GIS to create GIS layers, using GIS to perform queries and searches, and create maps and reports, including statistical reports. Additionally, students will learn how to properly capture, store and format data so that it can be used in GIS, as well as how to re-format existing data in order to create maps of the data.
Prerequisites: BIOS 5200, EPID 5200.

EPID 5305: Epidemiology of Aging (3)
This course will prepare students to effectively study health characteristics of the rapidly increasing population of older adults in the United States. Some of the topics covered will include changes in national and international age and lifespan demographics; theories of aging; the limits of the human lifespan and life-extension efforts; the interrelation of aging, health, and the environment; measurement of survival, mortality, and cause of death; measurement of physical functioning and activities of daily living; age- and disease-related changes in cognitive functioning; depression in older adults; injury (falls, driving accidents); the influence of age on disease and how to account for the age effects in the study of disease; health, frailty, and "successful" aging. Students will examine methods for conducting epidemiological studies in older populations and the implications of an aging society on public health practice.
Prerequisites: BIOS 5200, EPID 5200.

EPID 5306: Advanced Spatial Analysis (3)
Geographic Information Systems (GIS) provide a powerful tool for analyzing spatial patterns. Applications of spatial analysis are rapidly expanding to encompass diverse phenomena. For example, an epidemiologist might use spatial analysis tools to determine if there is clustering of infectious disease cases near a suspected source of the pathogen. An analyst at an urban public health department might use it to understand how fall injuries are distributed in a particular city and if there are specific environmental reasons for this clustering effect. This research seminar is meant to advance students knowledge of tools available for spatial analysis - beyond those presented in the introductory course to GIS (GIS in Public Health BIOS5304/EPID5304).
The course embeds learning quantitative research and spatial analysis methods in the context of developing and carrying out unique research questions and learning methods for answering those questions. Early in the semester students will begin to develop research questions that use advanced GIS techniques. In order to assist students with crafting their research questions methodology readings will be provided. While students develop their topics they will also be learning advanced techniques for spatial analysis. Advanced Spatial Analysis topics will include:

- Spatial statistics and cluster analysis
- Spatial interpolation
- Constructing and analyzing networks using Network Analyst
- Remote sensing health and environmental data
- Basic scripting

The course provides a great opportunity to begin testing and developing Culminating Experience or thesis ideas and methods.
Prerequisites: BIOS 5200, EPID 5200, EPID5304.

EPID 5307: Critical Approaches to the Epidemiologic Literature
This course will develop a systematic approach to the critical appraisal of the epidemiologic literature. Students will be required to follow a standardized outline for the critical review of published scientific papers drawn from both chronic disease and infectious disease epidemiology. The objectives for this course are twofold. First, the students are to gain a rigorous technique for assessing the quality of the science behind the epidemiologic methods in published studies. Second, students are to apply nuanced critical thinking to scientific results in published studies. The principles learned in EPID 5200, EPID 5201, and EPID 5205 will be extensively applied throughout this course.
Prerequisites: BIOS 5200, EPID 5200, EPID 5201, EPID 5205.

EPID 5310: Independent Study (1-3)
Independent study courses focus on a particular issue or set of issues related to a particular topic in public health. An Independent Study Program consists of assignments, research papers, clinical experiences and presentations submitted for academic credit. The student works closely with the professor(s) to determine the study focus and requirements.

HEALTH POLICY AND MANAGEMENT REQUIRED TRACK CORE COURSES (12 credits)

HPMG 5202: Health Care Advocacy and Politics (3)
This course will review basic legal and legislative processes at both state and federal levels. Students will learn how changes are made in the health system and ways of abetting change.

HPMG 5203: Health Management Concepts (3)
Basic concepts of management and organization behavior will be explored in this course. The role of management in complex organizations and the ways in which organizations change will be discussed. Students will learn how to relate to supervisors and staff and how to encourage optimal working conditions.

HPMG 5204: Access, Cost and Quality of Care (3)
This course will look in detail at the U.S. Health care system in terms of its major components, their interactions, and how to best effect positive change that will improve health and health care services for the population.

HPMG 5207: Principles in Hospital Management (3)
This course helps prepare a student for potential leadership positions in hospitals and other healthcare settings. It explores in depth a range of practical topics including governance, legal and ethical issues, risk management, quality management, accreditation, licensing, marketing, financial management, regulatory compliance, strategic planning, departmental roles and the migration of services to ambulatory settings. Case studies, team exercises, and interviews with organizational leaders form the framework of the course.

HEALTH POLICY AND MANAGEMENT ELECTIVE COURSES (9 credits)
Three courses at 3 credits each for 9 credits. Master's students may also take doctoral level electives with permission of instructor

HPMG 5201: Health Policy in the Delivery System (3)
This course focuses on the intersection between public health, policy, and politics. It provides an orientation to health policy, politics, and the policy in the U.S.
Prerequisite: HPMG 5206.

HPMG 5300: Health Care Finance (3)
This course will review basic principles of accounting and finance as well as how to understand basic financial reporting tools such as income statements and balance sheets. Students will learn the special features of health care finance—both the sources of funds coming into the health system as well as the micro allocation of costs within institutions and organizations.
Prerequisite: HPMG 5206.

HPMG 5302: Pharmaceuticals and the Health Care System (3)
This course will examine how the growth of pharmaceuticals impacts the health care budget and the ways in which disease is treated. The course will cover the pharmaceutical industry and its influence on the policy process, the path of drugs through the clinical trials and FDA process, and the ways in which drugs are marketed to physicians and the public.
Prerequisite: HPMG 5206.

HPMG 5305: Organizational Change in Health Care (3)
Organizational Change in Health Care presents guidelines for improving the implementation of change in health care organizations. When hospitals and other healthcare organizations introduce new clinical and management practices, these efforts all too frequently result in poor compliance and incomplete implementation. Drawing on organization theory and health services research, this course will enable

students to analyze some of the barriers to implementing change and apply methods designed to overcome these barriers.

Prerequisite: HPMG 5206, HPMG 5203.

HPMG 5306 Policy Studies in urban and immigrant health

This course will explore from a public health perspective the range of policies that affect specific vulnerable groups. This approach exemplifies a core aspect of Principles of the Ethical Practice of Public Health:

> *Public health should advocate and work for the empowerment of disenfranchised community members, aiming to ensure that the basic resources and conditions necessary for health are accessible to all.*

Part of this hybrid course will take place asynchronously on-line. Each semester it will focus on three or four groups, which may vary over time. Examples may include injured veterans, undocumented immigrants, youth gangs, refugees, sex workers, or persons with chronic mental illness. A multidisciplinary faculty will explore with students the relevant policy issues and the potential public health responses. Students will complete a service-learning project in collaboration with members of one of the groups studied.

No prerequisite. Open to non-matriculated students with instructor's approval.

HPMG 5307 Global Issues in Maternal and Child Health Policy

This course helps prepare the student for a public health career to improve maternal and child health globally or locally. Part of this hybrid course will take place asynchronously on-line. Case studies from around the world will be the basis for critical analysis of current policies and of the evidence base for successful interventions. Typical issues for study include maternal mortality, contraception, safe abortion, female genital cutting, child survival, stillbirths, refugee populations, birth outcomes among immigrants to the US, sex trafficking, and toxic environmental exposures to women and children. All students will participate in a service-learning project related to the course content.

No prerequisite. Open to non-matriculated students with instructor's approval.

HPMG 5310 (Formerly URBA 5502): Independent Study (1-3)

Independent study courses focus on a particular issue or set of issues related to a particular topic in public health. An Independent Study Program consists of assignments, research papers, clinical experiences and presentations submitted for academic credit. The student works closely with the professor(s) to determine the study focus and requirements.

FIELD EXPERIENCE:

All MPH students must complete a Field Experience.

PUBH 6500: Field Experience 1 credit
This course is an opportunity for students to apply the knowledge and skills learned in the classroom directly in a fieldwork experience. After completion of an online module on professionalism, the student will work at an approved external site, typically a local or state health agency or a local organization under the supervision of a public health professional. If a student is able to do a placement only in his or her regular place of employment, the assignment must extend beyond or be something other than his or her regular work duties and allow application of knowledge and skills learned in the classroom.

CULMINATING EXPERIENCE:

All MPH students must complete a Culminating Experience within their chosen program of study.

BIOS 6001: Culminating Experience in Biostatistics 2 credits
The Culminating Experience in Biostatistics allows the student to demonstrate the ability to integrate knowledge and skills in a Final Project similar to some aspect of practice as a public health professional. The faculty uses the Culminating Experience to judge whether the student demonstrates proficiency in the competencies required for public health practice.
Prerequisite: All CORE and TRACK Courses.

CHSC 6001: Culminating Experience in Community Health Sciences 2 credits
The Culminating Experience in Community Health Sciences allows the student to demonstrate the ability to integrate knowledge and skills in a Final Project similar to some aspect of practice as a public health professional. The faculty uses the Culminating Experience to judge whether the student demonstrates proficiency in the competencies required for public health practice.
Prerequisite: All CORE and TRACK Courses.

EOHS 6001: Culminating Experience in Environmental and Occupational Health Sciences 2 credits
The Culminating Experience in Environmental and Occupational Health Sciences allows the student to demonstrate the ability to integrate knowledge and skills in a Final Project similar to some aspect of practice as a public health professional. The faculty uses the Culminating Experience to judge whether the student demonstrates proficiency in the competencies required for public health practice.
Prerequisite: All CORE and TRACK Courses.

EPID 6001: Culminating Experience in Epidemiology 2 credits
The Culminating Experience in Epidemiology allows the student to demonstrate the ability to integrate knowledge and skills in a Final Project similar to some aspect of practice as a public health professional. The faculty uses the Culminating Experience to judge whether the student demonstrates proficiency in the competencies required for public health practice.
Prerequisite: All CORE and TRACK Courses.

HPMG 6001: Culminating Experience in Health Policy and Management 2 credits
The Culminating Experience in Health Policy and Management allows the student to demonstrate the ability to integrate knowledge and skills in a Final Project similar to some aspect of practice as a public health professional. The faculty uses the Culminating Experience to judge whether the student demonstrates proficiency in the competencies required for public health practice.
Prerequisite: All CORE and TRACK Courses.

Examples of Field Experiences completed by MPH students are:

A Free Nicotine Patch Distribution to Korean-American Smokers	NYC Department of Health and Mental Hygiene
A Logistics Manual for a Community Glaucoma Screening Program	Dept. of Ophthalmology
A Qualitative Study of the Attitudes of Guyanese-American Men Towards Prostate Cancer Screening	Shri Suryanarayan Mandir
A Qualitative Study of the Effectiveness of a Heart Health Educational Program for Chinese Americans in Manhattan's Chinatown	Charles B. Wang Community Health Center
A Report to the Community on the Health Status of Young Women of Color in NYC	Young Women of Color Coalition
Building Public Health Capacity at a Church Through a Parish Blood Drive	Church of St. Savior
Creating a Health Resource Guide for Brooklyn Youth	University Hospital of Brooklyn
Disaster Preparedness for the Pediatric Population: Planning an In-Hospital Triage System for New York City Hospitals	Center for Biological Preparedness
Effect of a Brief Educational Intervention on Inner-city Patients with Hepatitis C	Kings County Hospital Center, University Hospital of Brooklyn
Establishing a Mobile Needle-Exchange Program: Logistics and Client Education	Positive Health Project
Health Education Seminars for Yemeni Immigrants	Arab-American Family Support Center
Identifying Predictors of Serostatus Disclosure in an HIV-Treatment Population	STAR Program
Nursing Factors Associated with Influenza Immunization of Inpatients	University Hospital of Brooklyn
Pilot program for Integration of HIV Treatment at HIV Testing Sites in Addis Ababa.	African Services Committee
Promotion of Hepatitis C Screening in the Polish Community of Greenpoint, Brooklyn	NYC Department of Health and Mental Hygiene
Raising Awareness of Heart Disease in Orthodox Jewish Women	Bikur Cholim (Guardians of the Sick)/N'shei Women's Groups
Relationship Between Folic Acid Levels and Depressive Symptomatology in NHANES (National Health And Nutrition Examination Survey)	----------
Screening and Education for Hypertension at a Senior Health Fair in Crown Heights	Christopher Blenman Senior Center
Trends in Cancer Screening in Asian-Pacific Islander Women: An Analysis of NHIS (National Health Interview Survey) Data	----------

DrPH REQUIREMENTS

DrPH PROGRAM

The Doctor of Public Health (DrPH) program is designed to be completed in three (3) years of full-time academic work, or up to seven (7) years of part-time academic work, including the doctoral dissertation.

A doctoral degree candidate must complete the proposed DrPH program core requirements as well as the requirements of the track specialty. Electives, which provide a further in-depth examination of selected issues, will complete the program requirements. For all students, the number of credits required for successful completion of the program is 45.

All students must complete at least one field experience and a dissertation, an original research study that integrates theory and practice. In addition, each student is required to complete an oral examination as well as a defense of the doctoral original research study.

DRPH CORE REQUIREMENTS (12 CREDITS)

Course #	Course Title	Credits
BIOS 7200	Quantitative Research Methods For Public Health Practice	3
PUBH 7201	Study Design in Public Health in Public Health Practice	3
HPMG 7200	Public Health Management And Ethics	3
PUBH 7200	Public Health Policy and Politics Seminar	3

COMMUNITY HEALTH SCIENCES CORE REQUIREMENTS (12 CREDITS)

In addition to the DrPH core requirements, all students for a DrPH with a specialization in Community Health Sciences must complete the following core requirements for the CHSC track.

Course #	Course Title	Credits
CHSC 7201	Qualitative Research Methods for Public Health Practice	3
CHSC 7202	Methods of Community Intervention and Research	3
CHSC 7203	Program Evaluation: Theory, Practice, and Research	3
CHSC 7204	Health Promotion Seminar	3

COMMUNITY HEALTH SCIENCES ELECTIVES (6 CREDITS)

Students have a range of elective choices to complete the requirements for a DrPH. All students must complete six (6) elective credits.

Course #	Course Title	Credits
CHSC 7300	Theories of Health Behavior	3
CHSC 7301	Psychosocial and Behavioral Epidemiology	3
CHSC 7302	Health Communication Theory and Practice	3
CHSC 7303	Survey Research Methods	3
CHSC 7304	Culture, Class, and Ethnicity in Health Promotion	3
CHSC 7305	International Case Studies in Community Health	3
CHSC 7320	Independent Study	1-3

ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES CORE REQUIREMENTS (12 CREDITS)

In addition to the DrPH core requirements, all students for a DrPH with a specialization in Environmental and Occupational Health Sciences must complete the following core requirements for the EOHS track.

Course #	Course Title	Credits
EOHS 7202	Advanced Topics in Risk Assessment and Management	3
EOHS 7203	Environmental Health Policy and Management Systems	
EOHS 7205	Environmental Health Policy and Management Systems	3
EOHS 7300	Advanced Topics in Occupational Health	3

ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES ELECTIVES (6 CREDITS)
Students have a range of elective choices to complete the requirements for a DrPH. All students must complete six (6) elective credits.

Course #	Course Title	Credits
EOHS 7204	Organization of Work, Occupational Stress, and Health	3
EOHS 7301	Emerging Issues in Local, National, and Global Environmental Health	3
EOHS 7302	Disaster Preparedness and Response	3
EOHS 7303	Environmental Health Law	3
EOHS 7320	Independent Study	1-3

EPIDEMIOLOGY CORE REQUIREMENTS (12 CREDITS)
In addition to the DrPH core requirements, all students for a DrPH with a specialization in Epidemiology must complete the following core requirements for the EPID track.

Course #	Course Title	Credits
EPID 7201	Advanced Epidemiological Research Methods I	3
EPID 7202	Advanced Epidemiological Research Methods II	3
BIOS 7201	Probability Theory	3
BIOS 7202	Statistical Inference	3

EPIDEMIOLOGY ELECTIVES (6 CREDITS)
Students have a range of elective choices to complete the requirements for a DrPH. All students must complete six (6) elective credits.

Course #	Course Title	Credits
BIOS 7301	Applied Statistics and Data Mining	3
EIPD 7300	Epidemiology of Communicable Diseases	3
EPID 7301	Molecular Epidemiology, Biomarkers and Toxicology	3
EPID 7302	Cancer Epidemiology	3
EPID 7303	Chronic Disease Epidemiology	3
EPID 7320	Independent Study	1-3

All students must complete at least one field experience and a dissertation, an original research study that integrates theory and practice. In addition, each student is required to complete an oral examination as well as a defense of the doctoral original research study.

FIELD EXPERIENCE

All DrPH students must complete a Field Experience within their chosen program of study.

Course #	Course Title	Credits
CHSC 7000	Field Experience in Community Health Sciences	3
EOHS 7000	Field Experience in Environmental and Occupational Health Sciences	3
EPID 7000	Field Experience in Epidemiology	3

DrPH DISSERTATION

Course #	Course Title	Credits
PUBH 8001	DrPH Dissertation	12

DrPH COURSE DESCRIPTIONS

DrPH CORE COURSE DESCRIPTIONS:

Each course represents 3 credits for a total of 12.

BIOS 7200: Quantitative Research Methods for Public Health Practice (3)
This course uses an epidemiologic approach to analyze population-based studies drawn from secondary data to assist in public health decision-making. Students will work with national public datasets to address issues surrounding the analysis of epidemiologic research questions. Scientific and policy implications of the research will be addressed and the translation of results into programs and policies will be examined.

PUBH 7201: Study Design in Public Health in Public Health Practice (3)

Study Design in Public Health Practice provides a review of methodology for conducting research in public health. We will cover both quantitative and qualitative research approaches. At the end of the course, students will demonstrate understanding of all major types of study designs used in public health research, and will have a working knowledge of how to identify and address potential biasing and confounding factors. We will also cover methodology important for the implementation of studies, including questionnaire design and measurement.

HPMG 7200: Public Health Management and Ethics (3)
The Institute of Medicine has called for a public health leadership that "defines vision, focuses effort, optimizes resources, builds and sustains systems, facilitates communication and learning, fosters productive relationships and attends to success, planning, and knowledge transfer." This seminar seeks to equip students with these public health management and ethical skills across a wide range of practice settings. Emphasis will be given to cross-disciplinary approaches to addressing and resolving public health problems through the development of key management and leadership skills. Special attention is given to ethical considerations in strategic planning, decision-making and problem solving, and the requirements governing the conduct of human research. Course content will be a mix of case studies and in-class presentations from students and invited guests.

PUBH 7200: Public Health Policy and Politics Seminar (3)
This course will go beyond the basics of health policy (actors, processes, etc.), and require students to apply their knowledge of the framework of the American health care system toward the end of evaluating contemporary developments. Students will analyze different models of reform, and discover how the health care system comes to reflect the values prioritized by a given nation. The course will explore in systematic fashion how local, state, and federal bodies work in concert to collectively comprise what we call the American health care system, as well as the ways in which actors fail to work together--uncovering the 'asystematic' aspects of our country's arrangements in the arena of health care. Students will also learn how health care providers, specifically, relate to the broader system, and some of the ways in which they can hope to effect change.

COMMUNITY HEALTH SCIENCES CORE COURSES (12 credits)

CHSC 7201: Qualitative Research Methods for Public Health Practice (3)
This course offers advanced training in qualitative methods and analysis. Students will explore a range of qualitative research methods, including participant observation, unobtrusive methods, in-depth interviewing, and focus groups. They will carry out hands-on observation and interviewing during the course and will receive feedback from the instructor and other class participants. Research design issues will be discussed along with the use of qualitative data for health education theory building and program planning. Readings draw on different methodological guidelines, including Grounded Theory approaches.

CHSC 7202: Methods of Community Intervention and Research: (3)
Active academic and community partnerships are vital for improvements in community health and for reducing health-related disparities. This course will review key methods for engaging in community-based research, will involve students in active discussion and debate regarding current issues in the conduct of community-based research, and will provide an interdisciplinary perspective on how these approaches are applied across public health disciplines.

CHSC 7203: Program Evaluation: Theory, Practice, and Research (3)
This course focuses on the application of program evaluation models and approaches. Addresses formative and summative evaluation strategies for health promotion programs, and incorporates decision-making surrounding the use of quantitative and qualitative methods of assessment. Examines the planning of evaluation, construction of instruments and strategies of measurement, and methods of effective data collection, management, and analysis.

CHSC 7204: Seminar in Health Promotion (3)
This course is an in-depth exploration of topics and issues related to the design and conduct of health promotion programs and accompanying evaluations, with a focus on programs that seek to address disparities in health outcomes and public resource allocation. Students will develop expertise on a specified topic of interest, will develop a detailed multi-level analysis of a specific risk factor, and will critically analyze the evidence-base for programs designed to reduce identified risk factors.

FIELD EXPERIENCE IN COMMUNITY HEALTH SCIENCES

CHSC 7000: Field Experience in Community Health Sciences (3)
Students will gain in-depth work experience through supervised internships relevant to the student's career plans. The field practice is selected jointly by the student and the faculty advisor, and will involve opportunities to apply skills related to program planning, implementation, and/or evaluation as applied to behavior change efforts

ELECTIVE COURSES (6 credits)

CHSC 7300: Models and Theories of Health Behavior (3)
The course will involve an examination and critique of current and evolving models of health promotion and behavior change. An emphasis on this course will be the selection and utilization of health behavior theories to the design, measurement, and evaluation of public health interventions. Students will gain skills in the application of major individual, social, and community-level approaches to behavior change.

CHSC 7301: Psychosocial Behavioral Epidemiology (3 credits)
This course provides an in-depth exploration into the social, psychological, and behavioral issues that influence patterns of health and health care delivery. The focus is on the integration of the biomedical, social, psychological, and behavioral factors that must be taken into consideration when public health initiatives are developed and implemented. The course will also include the application of epidemiologic methods to the study of social, psychological, and behavioral influences on health, disease, and recovery/mortality. Students will explore in depth both micro and macro level determinants of a public health issue and explore themes of social justice as it pertains to public health disparities.

CHSC 7302: Health Communication Theory and Practice (3 credits)
This course will examine how health communication theory, marketing, and theories of behavior can be utilized to construct health communications that have the greatest impact on public health. Students will gain exposure to the practice and theory involved in communication design through critiques of health promotion interventions and campaigns and through development of communications to address public health issues.

CHSC 7303: Survey Research Methods (3 credits)
This course provides students with knowledge and skills in the design, sampling, implementation, analysis, interpretation, and presentation of results of surveys.
Lectures will focus on designing and assessing the items used to assess risk and protective factors and related public health outcomes.
Students will have the opportunity to design measures and to assess survey data using statistical software packages.

CHSC 7304: Culture, Class, and Ethnicity in Health Promotion (3 credits)
This course is a series of experiential training exercises to develop skills for practitioners who will conduct interventions or research with target populations of various cultures, social classes, and ethnicities. Emphasis is on critical awareness of the practitioner's own values and presumptions, historical experiences of abuse in public health programs, in-depth understanding of the values and perspective of target populations, and the development of leaders from within the target population.

CHSC 7305: International Case Studies in Community Health
This course will explore topics and issues related to public health in communities in selected countries through in-depth analysis and discussion of case studies. Themes and countries covered during each course may vary in different semesters.

ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES
CORE COURSES (12 credits)

EOHS 7202: Advanced Topics in Risk Assessment and Management (3)
This course reviews the core foundations of risk assessment including hazard identification, dose response, exposure assessment, and risk characterization and provides practical experience in the study of risk management. Students will have the opportunity to explore in-depth how risk assessment and management serve as an interface between science and policy, and how risk communication can present ethical challenges to public health practitioners. Specific case studies will focus on risk management and communication issues in urban and immigrant populations.

EOHS 7203: Environmental Health Policy and Management Systems (3)
This course examines the social, political, and legal foundations of the policy and management of current environmental health issues. This course focuses on environmental and occupational health laws, regulations, and guidance concerning air and water pollution, pesticide and toxic chemical manufacture and use, worker protection, disposal of solid and hazardous wastes, and worker and community right-to-know issues. Students will gain a thorough understanding of existing occupational and environmental health management systems and regulatory requirements and through structured assignments and presentations will understand local and international environmental and occupational health issues, environmental justice, workers compensation, and state/federal agencies in a systems framework.

EOHS 7205 (Formerly: EOHS 7305: Food Safety Issues): Safety of the Food Supply (3)
Substantial public health resources are devoted to assure that the food chain from American and imported venues are free from pathogens and toxic chemicals. There are strict governmental standards and mandates and delegated responsibility for enforcement. Food borne illness has severe economic costs and consequences for those affected and for those responsible. Epidemiologic investigations and root cause analysis provide evidence for corrective actions and deterrence to continue to provide a safe table.

EOHS 7300: Advanced Topics in Occupational Health (3)
Surveys the history of occupational health, the continuum from exposure to disease, the hierarchy of controls in the workplace, occupational health hazards, legal and regulatory issues, provision of occupational health services, and methods in comprehensive workplace health improvement. A series of case studies will examine local, national, and global issues and will provide practical up-to-date knowledge in assessing and solving occupational health problems.

FIELD EXPERIENCE IN ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES

CHSC 7000: Field Experience in Environmental and Occupational Health Sciences (3)
The field experience provides depth to the core DrPH by reinforcing the didactic core coursework through structured field practice. It acts as a bridge to the dissertation research through application of research methods learned in the core courses to environmental health situations that address urban and immigrant health issues in the local community. Under the guidance of the instructor and in collaboration with community environmental health project leaders, students will have a structure hands-on experience that will call upon core skills in survey/evaluation research, monitoring and health analysis. Students will be expected to produce an environmental assessment and to communicate the findings to community participants.

ENVIRONMENTAL HEALTH SCIENCES ELECTIVE COURSES (6 credits)

EOHS 7204: Organization of Work, Occupational Stress, and Health (3)
This course provides an in-depth evaluation of current topics related to psychosocial occupational and environmental health. The application of public health principles and decision-making processes will be discussed in relation to the prevention of injury and disease, health promotion and protection of worker populations from psychosocial occupational and environmental hazards.

EOHS 7301: Emerging Issues in Local, National and Global Environmental Health (3)
Examines current and emerging environmental health issues such as water pollution, sanitation, urban poverty, war, pollution, food security, pesticides, hazardous waste, economic globalization, global warming, and energy usage. This course will explore the connections between these issues and public policies in developing and developed countries alike as well as the implications for the health of urban and immigrant groups.

EOHS 7302: Disaster Preparedness and Response (3)
Provides a framework for the critical evaluation and management of current environmental health issues related to disaster management. Topics include disaster preparedness and response to such threats as hurricanes, tornadoes, floods, infectious disease, toxic spills, explosions, and terrorist attacks. Students will be prepared for collaborative, multi-sectorial response by learning the principles of risk assessment, modern surveillance techniques, planning, preparation, public education, incident command, and mitigation through a series of case studies. The legal, ethical and financial aspects of disaster preparedness and response will receive special attention.

EOHS 7303: Environmental Health Law (3)
Examines the constitutional, legal, and historical foundations of programs and processes aimed at protecting human health and the environment and equips students to understand the organizations, forces and governmental institutions that drive formulation and implementation of public policies at the local, state, federal, and international level. Focuses on environmental and occupational health laws, regulations and guidance, including those concerning air and water pollution, pesticide and toxic chemical manufacture and use, worker protection, disposal of solid and hazardous wastes, citizen suits, and worker and community right-to-know. Addresses international environmental and occupational health issues, environmental justice, property rights, workers compensation, land use issues, state/federal responsibilities, and administrative agencies. Explores public sector perspectives including local health departments and private sector perspectives including corporate responsibility.

EPIDEMIOLOGY CORE COURSES (12 credits)

EPID 7201: Advanced Epidemiological Research Methods I (3)
This course explores the nature of causal inferences in epidemiology, and the methods by which they may be determined. Most sessions involve student presentations of relevant examples from the epidemiologic literature to illustrate concepts and methods, followed by general discussion. Topics to be covered

include assessing bias, confounding and interaction, dealing with threats to validity and issues of reporting and application of epidemiologic results.

EPID 7202: Advanced Epidemiological Research Methods II (3)
This course uses the SAS statistical software package to perform advanced quantitative methods used in the analysis of case-control studies and cohort studies. Students will acquire experience with the following types of data analysis: stratification, Mantel-Haenszel methods, survival and life tables, Kaplan-Meier methods, logistic regression, Poisson regression, Cox regression (proportional hazards), and generalized estimating equations (GEE).

BIOS 7201: Probability Theory (3)

This course will provide an introduction to probability theory. Topics to be covered include probability distributions (e.g., normal, binomial, Poisson), independence, conditional probability, joint distributions, expectation and moment generating functions, and the central limit theorem.

BIOS 7202: Statistical Inference (3)
This advanced level course is designed to provide students with an introduction to applied statistical inference, including probability and probability distributions, sampling theory, correlation and regression, principles of statistical inference, goodness of fit, and small sample distributions.

FIELD EXPERIENCE IN EPIDEMIOLOGY

EPID 7000: Field Experience in Epidemiology (3)
Provides depth to the core DrPH by reinforcing the didactic core coursework through structure field practice and acts as a bridge to the dissertation research through application of research methods learned in the core courses to actual public health epidemiological practice.

Under the guidance of the instructor and in collaboration with governmental or community resources, students will have a structured hands-on experience. Examples of potential sites are: hospital departments of infection control or tumor registries; the New York State Department of Health Zoonoses Program; the New York City Department of Health and Mental Hygiene HIV Epidemiology Program. Students will be expected to write a written report on the experience and to make a professional presentation of their experience at the interdisciplinary Doctoral Departmental seminar.

EPIDEMIOLOGY ELECTIVE COURSES (6 credits)

BIOS 7301: Applied Statistics and Data Mining
This course covers a variety of topics in applied statistics and data mining methods including principles, applications, and computational tools. The focus of the course is on understanding the theory behind these methods and applying them to topics in epidemiology and biostatistics. Students enrolled in the course will use R, a free computer program that allow for implementation of the methods covered during the course.

EPID 7203: Principles of Surveillance and Disease Control (3)
Public health surveillance is the continuous systematic collection, analysis, and interpretation of data essential to the planning, implementation, and evaluation of public health practice. Success depends upon the timely dissemination of these data to practitioners trained in interventions that prevent and control disease. This course reviews the major epidemiological surveillance programs, such as the National Notifiable Diseases Surveillance System, and newer approaches like syndromic surveillance. Students will have hands-on experience in utilizing selected datasets and will be expected to demonstrate competence in the accessing and management database systems.

EPID 7300: Epidemiology of Communicable Disease (3)
This course reviews the use of epidemiologic methods in the assessment of selected communicable diseases of national and international importance. Students focus on methods of transmission, the role of surveillance, and methods of control and prevention. Specific disease examples to be covered will include: tuberculosis, HIV, legionellosis, SARS, influenza, measles, Lyme disease, syphilis, as well as nosocomial, food-borne, and enteric infections. The principles of controlling antibiotic-resistant organisms will receive special attention. Students use case studies to practice the skills necessary for an outbreak investigation and other common procedures in this field.
Prerequisites: BIOS 5200, EPID 5200, EPID 7204

EPID 7301: Molecular Epidemiology, Biomarkers and Toxicology (3)
This course presents the techniques used in genetic and molecular epidemiology. Emphasizes the scientific basis of molecular epidemiology and provides examples of the application of molecular biology, analytical chemistry, and toxicology to the study of chronic disease etiology and its public health application. Topics to be covered include fundamental concepts of genetics; study designs and methods of statistical analysis used to evaluate the role of genetic inheritance in the occurrence of human disease; techniques to determine the location of the gene(s) and allele responsible for a disease; ethical implications of genetic research and databanks; common genetic diseases and their control; and use of genetic and molecular techniques in human exposure assessment.

EPID 7302: Cancer Epidemiology (3)
This course reviews the concepts and methodological issues in epidemiologic studies of cancer etiology and control. Students learn the molecular and cellular basis of cancer, the role of experimental studies in assessing human risk, the classification and nomenclature of human cancer and the morphology, as well as the natural history and etiologic importance of precursor lesions. Students will examine in depth a variety of types of cancer of public health significance and discuss the role of public health practitioners in cancer control and cancer screening.

EPID 7303: Chronic Disease Epidemiology (3)
This course focuses on the epidemiologic concepts and methods appropriate to the study of chronic (mostly non-infectious) diseases and diseases of unknown etiology. Students will compare the approaches in descriptive, analytic, and experimental epidemiology for chronic disease with those for acute infectious diseases. Students will develop an extensive understanding of the epidemiologic, etiologic, pathophysiologic, and clinical features of important prevalent and emerging chronic diseases, including cardiovascular diseases, diabetes, arthritis, chronic obstructive lung disease, neurologic disorders, and mental illness. The class will examine risk assessment and applied epidemiologic methods to prevent or limit specific chronic diseases.

QUALIFYING EXAMINATION (QE)

Qualifying Exam Format:

Two (2) day exam (the two days are separated by 1 week)

- **Day 1:**
  - Student will choose to answer 4 out of 6 short essay questions that originate from the core courses within her/his department; in each question the student is asked to apply core content to a specific real-world situation. The student will have approximately 6 hours to complete the exam questions; Laptops with no internet access will be provided to the students; Students will not be allowed to refer to notes/texts from coursework.
- **Day 2:**
  - **Part 1:** Student will choose to answer 2 out of 4 short essay questions that cover breadth topics stemming from the 4 DrPH core courses; by answering these questions the student is expected to demonstrate the ability to work with a range of issues as public health leaders. The student will have approximately 3 hours to complete those questions; Laptops with no internet access will be provided to the students; Students will not be allowed to refer to notes/texts from coursework.

  - **Part 2:** Student will be given an empirical research article to critique; The student will need to respond to approximately 10 questions regarding the article; The questions will focus on core DrPH competencies and will not be specific to a content area; in answering this set of questions the student can demonstrate the ability to use professional literature in a meaningful and practical way to address public health problems. The student will have approximately 3 hours to complete this; Laptops with no internet access will be provided to the students; Students will not be allowed to refer to notes/texts from coursework.

Sitting for exam:
The exam will be scheduled for two days (separated by 1 week) at the end of each semester, as needed. For a student to be eligible to take the exam, s/he needs to have completed all course work. The Program of Study Form needs to be completed with all the courses, the semesters in which they were taken and the corresponding grades filled in. The student can get an updated copy of the form from the SPH Director of Student Affairs. The student needs to have his/her department chair and advisor sign off on the form and then the form needs to be submitted to the Director of Student Affairs. The student needs to present the form and give the chairperson (and the resulting qualifying exam committee) at least 8 weeks notice (prior to the end of the semester), so that there is time for the exam questions to be generated. If the student does not feel that s/he is ready, then the student will need to wait until the two dates at the end of the following semester to take the exam.

Qualifying exam committee:
The committee will consist of three members: 2 from the student's home department and 1 from an outside department; The chairperson of the home department will choose the two faculty from her/his department and will designate 1 as the chair of that student's QE committee. The department chair will also contact a chair from another department to choose 1 faculty member as the outside department QE committee member.

The two members from the home department will generate the six exam questions from the home department with input from the faculty in their department who taught the departmental core courses for the particular student/s. These two members will also generate a set of bullet points of content that needs to be covered in the student's responses to the questions. They will ultimately be responsible for deciding whether the answers to each of the home department questions warrants a pass or a fail. The QE committee member from the outside department will be responsible for generating the four questions derived from the core DrPH courses and their answers with the assistance of others in their department as

well as the instructors of the student's core courses. This person (with oversight from the rest of the QE committee) will decide whether the answers to the two (out of four) questions warrant a pass or a fail. If there is more than one student from the same cohort taking the exam (i.e., students who took the same courses at the same time with the same professors), then the "outside" faculty members from all the QE committees can work together to generate the four exam questions so that the students receive the same questions.

The article critique will be given to all students as it will likely be an article from AJPH or a similar journal that is not specific to any one department. The chair of the QE committee/s (depending on how many students are taking the exam), will meet to generate the questions and criteria for passing the article critique portion of the exam.

If a student fails only one part of the exam (Day 1 or Day 2), s/he is only required to retake that part of the exam. The student should retake the exam the next time the exam is given (either the following Dec or May). If a student fails both parts of the exam, s/he is required to take the entire exam over. A student is only allowed one opportunity to retake the exam.

DrPH DISSERTATION (12 credits)

PUBH 8001: DrPH Dissertation (12)
The DrPH dissertation is a twelve-credit experience extending, on average, over a three year period. The topic of the dissertation must address a significant public health problem in the student's specialty area.

Dissertation Credits: A student cannot enroll for dissertation credits until the student has passed his/her Oral Defense.
Twelve (12) credits are required to complete the dissertation. The 12 credits can be allocated in several ways, but must be done with the approval of the student's advisor.

- The preferred method is for the student to take a minimum of three (3) credits per semester upon successful completion of his/her oral defense.
- If the student has finished all 12 credits and still has not completed the dissertation, then the student must continue to sign up for Independent Study credits until the dissertation study has been completed.
- In exceptional circumstances, and with the approval of the student's advisor, a student can sign for up for all 12 credits in one semester.

Dissertation Development
The student, having advanced to candidacy, has one (1) year to develop his/her dissertation proposal and defend it before his/her dissertation committee and the public. The proposal must contain the following elements:

- Study Aims and Hypothesis
- Relevant Review of the Literature
- Design and Methods complete with statistical analysis
- Protection of Participants
- Proposed Timeline

The dissertation must represent the original thinking and analysis of the student. It does not necessarily require the collection of new data; but it must demonstrate that the candidate is capable of independent scientific analysis at an advanced professional level.

Oral Presentation of Proposed Dissertation Topic: **No credit**
There will also be an oral presentation of the dissertation topic - no more than 30 minutes -- by the student to his/her dissertation committee and the public. The presentation will be followed by questioning from the student's dissertation committee and the public. The purpose is to ascertain that the proposed work is appropriate and that the student has the adequate knowledge of the topic and the skills to complete the work successfully.

The Dissertation:

Throughout the development, implementation, and evaluation of the dissertation project, the student should meet regularly with his/her dissertation chair (student's advisor). As necessary, the student should also meet with other members of his/her committee to review specific portions of the proposal as appropriate to their expertise. Periodic revisions should be circulated to all members of the committee upon approval of the committee chair. Revisions should be noted in a cover memo to the committee members such that they will be kept up to date.

When the study is deemed completed and ready, final approval must be received, in writing, from the chair of the dissertation committee (student's advisor) with agreement from all members of the committee. This process must be completed at least one (1) month prior to the proposed date for the study defense. With the designated approval, the defense date will then be scheduled.

The Defense

There are two (2) portions to the defense:

- Public presentation of the student's research, 30 minutes, with questions and comments from attendees, followed by
- Closed session with dissertation committee, and any members of the DrPH Program faculty, to discuss any particular details of the dissertation and/or defense.

Note that the committee may either accept without change the student's study or, alternately, require additional clarification regarding key points of the study. The dissertation (study) achieves final approval when all members of the committee agree that the written dissertation and presentation have been satisfactorily completed. The student is strongly encouraged to prepare the study for submission to a peer-reviewed journal for publication.

PUBLIC HEALTH COMPETENCIES

A. BIOSTATISTICS

Biostatistics is the development and application of statistical reasoning and methods in addressing, analyzing and solving problems in public health; health care; and biomedical, clinical and population-based research.

Competencies: Upon graduation a student with an MPH should be able to…

A. 1. Describe the roles biostatistics serves in the discipline of public health.
A. 2. Describe basic concepts of probability, random variation and commonly used statistical probability distributions.
A. 3. Describe preferred methodological alternatives to commonly used statistical methods when assumptions are not met.
A. 4. Distinguish among the different measurement scales and the implications for selection of statistical methods to be used based on these distinctions.
A. 5. Apply descriptive techniques commonly used to summarize public health data.
A. 6. Apply common statistical methods for inference.
A. 7. Apply descriptive and inferential methodologies according to the type of study design for answering a particular research question.
A. 8. Apply basic informatics techniques with vital statistics and public health records in the description of public health characteristics and in public health research and evaluation.
A. 9. Interpret results of statistical analyses found in public health studies.
A. 10. Develop written and oral presentations based on statistical analyses for both public health professionals and educated lay audiences.

B. COMMUNITY HEALTH SCIENCES (URBAN AND IMMIGRANT HEALTH) {SOCIAL AND BEHAVIORAL SCIENCES}

Community health sciences in public health address the behavioral, social and cultural factors related to individual and population health and health disparities over the life course. Research and practice in this area contributes to the development, administration and evaluation of programs and policies in public health and health services to promote and sustain healthy environments and healthy lives for individuals and populations.

Competencies: Upon graduation a student with an MPH should be able to…

B. 1. Identify basic theories, concepts and models from a range of social and behavioral disciplines that are used in public health research and practice.
B. 2. Identify the causes of social and behavioral factors that affect health of individuals and populations.
B. 3. Identify individual, organizational and community concerns, assets, resources and deficits for social and behavioral science interventions.
B. 4. Identify critical stakeholders for the planning, implementation and evaluation of public health programs, policies and interventions.
B. 5. Describe steps and procedures for the planning, implementation and evaluation of public health programs, policies and interventions.
B. 6. Describe the role of social and community factors in both the onset and solution of public health problems.
B. 7. Describe the merits of social and behavioral science interventions and policies.
B. 8. Apply evidence-based approaches in the development and evaluation of social and behavioral science interventions.
B. 9. Apply ethical principles to public health program planning, implementation and evaluation.
B. 10. Specify multiple targets and levels of intervention for social and behavioral science programs and/or policies.

C. ENVIRONMENTAL HEALTH SCIENCES
Environmental health sciences represent the study of environmental factors including biological, physical and chemical factors that affect the health of a community.

Competencies: Upon graduation a student with an MPH should be able to…
C. 1. Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.
C. 2. Describe genetic, physiologic and psychosocial factors that affect susceptibility to adverse health outcomes following exposure to environmental hazards.
C. 3. Describe federal and state regulatory programs, guidelines and authorities that control environmental health issues.
C. 4. Specify current environmental risk assessment methods.
C. 5. Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety.
C. 6. Explain the general mechanisms of toxicity in eliciting a toxic response to various environmental exposures.
C. 7. Discuss various risk management and risk communication approaches in relation to issues of environmental justice and equity.
C. 8. Develop a testable model of environmental insult.

D. EPIDEMIOLOGY
Epidemiology is the study of patterns of disease and injury in human populations and the application of this study to the control of health problems.

Competencies: Upon graduation a student with an MPH should be able to…
D. 1. Identify key sources of data for epidemiologic purposes.
D. 2. Identify the principles and limitations of public health screening programs.
D. 3. Describe a public health problem in terms of magnitude, person, time and place.
D. 4. Explain the importance of epidemiology for informing scientific, ethical, economic and political discussion of health issues.
D. 5. Comprehend basic ethical and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiologic data.
D. 6. Apply the basic terminology and definitions of epidemiology.
D. 7. Calculate basic epidemiology measures.
D. 8. Communicate epidemiologic information to lay and professional audiences.
D. 9. Draw appropriate inferences from epidemiologic data.
D. 10. Evaluate the strengths and limitations of epidemiologic reports.

E. HEALTH POLICY AND MANAGEMENT
Health policy and management is a multidisciplinary field of inquiry and practice concerned with the delivery, quality and costs of health care for individuals and populations. This definition assumes both a managerial and a policy concern with the structure, process and outcomes of health services including the costs, financing, organization, outcomes and accessibility of care.

Competencies: Upon graduation a student with an MPH should be able to…
E. 1. Identify the main components and issues of the organization, financing and delivery of health services and public health systems in the US.
E. 2. Describe the legal and ethical bases for public health and health services.
E. 3. Explain methods of ensuring community health safety and preparedness.
E. 4. Discuss the policy process for improving the health status of populations.
E. 5. Apply the principles of program planning, development, budgeting, management and evaluation in organizational and community initiatives.
E. 6. Apply principles of strategic planning and marketing to public health.
E. 7. Apply quality and performance improvement concepts to address organizational performance issues.
E. 8. Apply "systems thinking" for resolving organizational problems.

E. 9. Communicate health policy and management issues using appropriate channels and technologies.
E. 10. Demonstrate leadership skills for building partnerships.

F. LEADERSHIP
The ability to create and communicate a shared vision for a changing future; champion solutions to organizational and community challenges; and energize commitment to goals.

Competencies: Upon graduation, it is increasingly important that a student with an MPH be able to…
F. 1. Describe the attributes of leadership in public health.
F. 2. Describe alternative strategies for collaboration and partnership among organizations, focused on public health goals.
F. 3. Articulate an achievable mission, set of core values, and vision.
F. 4. Engage in dialogue and learning from others to advance public health goals.
F. 5. Demonstrate team building, negotiation, and conflict management skills.
F. 6. Demonstrate transparency, integrity, and honesty in all actions.
F. 7. Use collaborative methods for achieving organizational and community health goals.
F. 8. Apply social justice and human rights principles when addressing community needs.
F. 9. Develop strategies to motivate others for collaborative problem solving, decision-making, and evaluation.

G. PROFESSIONALISM
The ability to demonstrate ethical choices, values and professional practices implicit in public health decisions; consider the effect of choices on community stewardship, equity, social justice and accountability; and to commit to personal and institutional development.

Competencies: Upon graduation, it is increasingly important that a student with an MPH be able to…
G. 1. Discuss sentinel events in the history and development of the public health profession and their relevance for practice in the field.
G. 2. Apply basic principles of ethical analysis (e.g. the Public Health Code of Ethics, human rights framework, other moral theories) to issues of public health practice and policy.
G. 3. Apply evidence-based principles and the scientific knowledge base to critical evaluation and decision-making in public health.
G. 4. Apply the core functions of assessment, policy development, and assurance in the analysis of public health problems and their solutions.
G. 5. Promote high standards of personal and organizational integrity, compassion, honesty and respect for all people.
G. 6. Analyze determinants of health and disease using an ecological framework.
G. 7. Analyze the potential impacts of legal and regulatory environments on the conduct of ethical public health research and practice.
G. 8. Distinguish between population and individual ethical considerations in relation to the benefits, costs, and burdens of public health programs.
G. 9. Embrace a definition of public health that captures the unique characteristics of the field (e.g., population-focused, community-oriented, prevention-motivated and rooted in social justice) and how these contribute to professional practice.
G. 10. Appreciate the importance of working collaboratively with diverse communities and constituencies (e.g. researchers, practitioners, agencies and organizations).
G. 11. Value commitment to lifelong learning and professional service including active participation in professional organizations.

H. PUBLIC HEALTH BIOLOGY
The ability to incorporate public health biology - the biological and molecular context of public health - into public health practice.

Competencies: Upon graduation, it is increasingly important that a student with an MPH be able to…

H. 1. Specify the role of the immune system in population health.
H. 2. Describe how behavior alters human biology.
H. 3. Identify the ethical, social and legal issues implied by public health biology.
H. 4. Explain the biological and molecular basis of public health.
H. 5. Explain the role of biology in the ecological model of population-based health.
H. 6. Explain how genetics and genomics affect disease processes and public health policy and practice.
H. 7. Articulate how biological, chemical and physical agents affect human health.
H. 8. Apply biological principles to development and implementation of disease prevention, control, or management programs.
H. 9. Apply evidence-based biological and molecular concepts to inform public health laws, policies, and regulations.
H. 10. Integrate general biological and molecular concepts into public health.

Public Health Biology Illustrative Sub-competencies are available at http://www.asph.org/document.cfm?page=928.

I. PROGRAM PLANNING
The ability to plan for the design, development, implementation, and evaluation of strategies to improve individual and community health.

Competencies: Upon graduation, it is increasingly important that a student with an MPH be able to…
I. 1. Describe how social, behavioral, environmental, and biological factors contribute to specific individual and community health outcomes.
I. 2. Describe the tasks necessary to assure that program implementation occurs as intended.
I. 3. Explain how the findings of a program evaluation can be used.
I. 4. Explain the contribution of logic models in program development, implementation, and evaluation.
I. 5. Differentiate among goals, measurable objectives, related activities, and expected outcomes for a public health program.
I. 6. Differentiate the purposes of formative, process, and outcome evaluation.
I. 7. Differentiate between qualitative and quantitative evaluation methods in relation to their strengths, limitations, and appropriate uses, and emphases on reliability and validity.
I. 8. Prepare a program budget with justification.
I. 9. In collaboration with others, prioritize individual, organizational, and community concerns and resources for public health programs.
I. 10. Assess evaluation reports in relation to their quality, utility, and impact on public health.

J. SYSTEMS THINKING
The ability to recognize system level properties that result from dynamic interactions among human and social systems and how they affect the relationships among individuals, groups, organizations, communities, and environments.

Competencies: Upon graduation, it is increasingly important that a student with an MPH be able to…
J. 1. Identify characteristics of a system.
J. 2. Identify unintended consequences produced by changes made to a public health system.
J. 3. Provide examples of feedback loops and "stocks and flows" within a public health system.
J. 4. Explain how systems (e.g. individuals, social networks, organizations, and communities) may be viewed as systems within systems in the analysis of public health problems.
J. 5. Explain how systems models can be tested and validated.
J. 6. Explain how the contexts of gender, race, poverty, history, migration, and culture are important in the design of interventions within public health systems.
J. 7. Illustrate how changes in public health systems (including input, processes, and output) can be measured.
J. 8. Analyze inter-relationships among systems that influence the quality of life of people in their communities.
J. 9. Analyze the effects of political, social and economic policies on public health systems at the local,

state, national and international levels.
J. 10. Analyze the impact of global trends and interdependencies on public health related problems and systems.
J. 11. Assess strengths and weaknesses of applying the systems approach to public health problems.

K. COMMUNICATION AND INFORMATICS
The ability to collect, manage and organize data to produce information and meaning that is exchanged by use of signs and symbols; to gather, process, and present information to different audiences in-person, through information technologies, or through media channels; and to strategically design the information and knowledge exchange process to achieve specific objectives.

Competencies: Upon graduation, it is increasingly important that a student with an MPH be able to…
K. 1. Describe how the public health information infrastructure is used to collect, process, maintain, and disseminate data.
K. 2. Describe how societal, organizational, and individual factors influence and are influenced by public health communications.
K. 3. Discuss the influences of social, organizational and individual factors on the use of information technology by end users.
K. 4. Apply theory and strategy-based communication principles across different settings and audiences.
K. 5. Apply legal and ethical principles to the use of information technology and resources in public health settings.
K. 6. Collaborate with communication and informatics specialists in the process of design, implementation, and evaluation of public health programs.
K. 7. Demonstrate effective written and oral skills for communicating with different audiences in the context of professional public health activities.
K. 8. Use information technology to access, evaluate, and interpret public health data.
K. 9. Use informatics methods and resources as strategic tools to promote public health.
K. 10. Use informatics and communication methods to advocate for community public health programs and policies.

L. DIVERSITY AND CULTURE
The ability to interact with both diverse individuals and communities to produce or impact an intended public health outcome.

Competencies: Upon graduation, it is increasingly important that a student with an MPH be able to…
L. 1. Describe the roles of, history, power, privilege and structural inequality in producing health disparities.
L. 2. Explain how professional ethics and practices relate to equity and accountability in diverse community settings.
L. 3. Explain why cultural competence alone cannot address health disparity.
L. 4. Discuss the importance and characteristics of a sustainable diverse public health workforce.
L. 5. Use the basic concepts and skills involved in culturally appropriate community engagement and empowerment with diverse communities.
L. 6. Apply the principles of community-based participatory research to improve health in diverse populations.
L. 7. Differentiate among availability, acceptability, and accessibility of health care across diverse populations.
L. 8. Differentiate between linguistic competence, cultural competency, and health literacy in public health practice.
L. 9. Cite examples of situations where consideration of culture-specific needs resulted in a more effective modification or adaptation of a health intervention.
L. 10. Develop public health programs and strategies responsive to the diverse cultural values and traditions of the communities being served.

MPH CONCENTRATION PUBLIC HEALTH CORE COMPETENCIES

A. BIOSTATISTICS

A. 1. Apply basic probability theory and statistical methods to public health and biomedical research questions.

A. 2. Design observational and experimental studies to address public health and biomedical research questions.

A. 3. Manipulate actual public health databases using statistical software packages.

A. 4. Use statistical software packages for data processing, management and descriptive and inferential analyses.

A. 5. Effectively communicate results of statistical analyses both orally and in writing, to lay and professional audiences.

A. 6. Critically review and critique statistical methods and interpretations presented in published public health and biomedical research reports.

A. 7. Provide biostatistical advice as a member of a multidisciplinary, research team engaged in an epidemiologic research project.

B. COMMUNITY HEALTH SCIENCES [Urban and Immigrant Health] [Social and Behavioral Health Sciences]

B. 1. Identify individual, biological, social, community, organizational, and policy-level determinants of public health problems.

B. 2. Explain the processes involved in identifying public health priorities in urban and immigrant communities and collaborating effectively to prioritize goals and objectives.

B. 3. Characterize the roles of history, power, privilege and inequality in producing health disparities.

B. 4. Identify basic theories from a range of social and behavioral disciplines that are used in public health research and practice.

B. 5. Delineate key strategies for the planning and implementation of programs targeting urban public health issues.

B. 6. Apply evidenced-based methods and designs for evaluating public health interventions that target urban and immigrant populations.

B. 7. Effectively communicate issues, verbally and in writing, as they relate to the practice of public health behavioral and social interventions.

B. 8. Apply ethical principles and cultural competence to public health program planning, implementation and evaluation.

C. ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES

C. 1. Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.

C. 2. Describe federal and state regulatory programs, guidelines and authorities that control environmental health issues.

C. 3. Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety.

C. 4. Discuss various risk management and risk communication approaches in relation to issues of environmental justice and equity.

C. 5. Identify social environmental factors, including socioeconomic status, neighborhood, and work organization, that influence health behaviors and contribute to health disparities.

C. 6. Evaluate the performance and impact of environmental and occupational health programs, policies, and legal systems.

C. 7. Identify strategies for assessment, prevention and control of injuries.

C. 8. Describe the impact of environmental and occupational hazards on vulnerable populations.

D. EPIDEMIOLOGY

D. 1. Identify types and sources of data used in epidemiologic research.

D. 2. Describe trends and patterns of incidence and prevalence for major diseases and factors

affecting health status of immigrant and urban populations, and indicate major etiologic and prognostic factors.
D. 3. Draw appropriate inferences from epidemiologic data, including the relation to findings from other epidemiologic studies, limitations of the study and public health implications.
D. 4. Evaluate the strengths and weaknesses of major descriptive and analytic design strategies used in epidemiologic research.
D. 5. Explain the policy implications of epidemiologic research findings.
D. 6. Critically evaluate published epidemiologic literature for strengths and weaknesses.
D.7. Develop a scientific hypothesis and design an appropriate epidemiologic study to assess the research question.
D. 8. Use statistical software packages for data processing, management, and descriptive and inferential analyses.
D. 9. Effectively communicate epidemiologic research findings orally and in writing, to lay and professional audiences.

E. HEALTH POLICY AND MANAGEMENT
E. 1. Identify the main components and issues of the organization, financing and delivery of health, services and public health systems in the US.
E. 2. Describe the legal and ethical bases for public health and health, services.
E. 3. Explain methods of ensuring community health safety and preparedness.
E. 4. Discuss the policy process for improving the health status of populations.
E. 5. Apply the principles of program planning, development, budgeting, management and evaluation in, organizational and community initiatives.
E. 6. Apply principles of strategic planning and marketing to public health.
E. 7. Apply quality and performance improvement concepts to address organizational performance issues.
E. 8. Apply "systems thinking" for resolving organizational problems.
E. 9. Communicate health policy and management issues using, appropriate channels and technologies.
E. 10. Demonstrate leadership skills for building partnerships.
E. 11. Advocate for Evidence-based Healthcare Policies.
E.12. Apply organizational theory to understand how healthcare and public health organizations operate.
E.13. Identify key economic factors and their impact on health policy and management.
E. 14. Describe how access, cost and quality of care impact the health of populations and health disparities.

DrPH CONCENTRATION PUBLIC HEALTH CORE COMPETENCIES

A. ADVOCACY
A. 1. Present positions on health issues, law and policy.
A. 2. Influence health policy and program decision-making based on scientific evidence, stakeholder input, and public opinion data.
A. 3. Utilize consensus-building, negotiation, and conflict avoidance and resolution techniques.
A. 4. Analyze the impact of legislation, judicial opinions, regulations, and policies on population health.
A. 5. Establish goals, timelines, funding alternatives, and strategies for influencing policy initiatives.
A. 6. Design action plans for building public and political support for programs and policies.
A. 7. Develop evidence-based strategies for changing health law and policy.

B. COMMUNICATION
B. 1. Discuss the inter-relationships between health communications and marketing.
B. 2. Explain communication program proposals and evaluations to lay, professional, and policy audiences.
B. 3. Guide an organization in setting communication goals, objectives, and priorities.
B. 4. Create informational and persuasive communication.
B. 5. Integrate health literacy concepts in all communication and marketing initiatives.
B. 6. Propose recommendations for improving communication processes.

C. COMMUNITY/CULTURAL ORIENTATION

C. 1. Develop collaborative partnerships with communities, policy makers, and other relevant groups.
C. 2. Engage communities in creating evidence-based, culturally competent programs.
C. 3. Conduct community-based participatory intervention and research projects.
C. 4. Design action plans for enhancing community and population-based health.
C. 5. Assess cultural, environmental, and social justice influences on the health of communities.
C. 6. Implement culturally and linguistically appropriate programs, services and research.

D. CRITICAL ANALYSIS

D. 1. Apply theoretical and evidence-based perspectives from multiple disciplines in the design and implementation of programs, policies, and systems.
D. 2. Interpret quantitative and qualitative data following current scientific/standards.
D. 3. Design needs and resource assessments for communities and populations.
D. 4. Develop health surveillance systems to monitor population health, health equity, and public health services.
D. 5. Synthesize information from multiple sources for research and practice.
D. 6. Evaluate the performance ad impact of health programs, policies, and systems.
D. 7. Weigh risks, benefits, and unintended consequences of research and practice.

E. LEADERSHIP

E. 1. Communicate an organization's mission, shared vision, and values to stakeholders.
E. 2. Develop teams for implementing health initiatives.
E. 3. Collaborate with diverse groups.
E. 4. Influence others to achieve high standards of performance and accountability.
E. 5. Guide organizational decision-making and planning based on internal and external environmental research.
E. 6. Prepare professional plans incorporating lifelong learning, mentoring, and continued career progression strategies.
E. 7. Create a shared vision.
E. 8. Develop capacity-building strategies at the individual, organizational, and community level.
E. 9. Demonstrate a commitment to personal and professional values.

F. MANAGEMENT

F. 1. Implement strategic planning processes.
F. 2. Apply principles of human resource management.
F. 3. Align policies and procedures with regulatory and statutory requirements.
F. 4. Deploy quality improvement methods.
F. 5. Organize the work environment with defined lines of responsibility, authority, communication, and governance.
F. 6. Develop financial and business plans for health programs and services.
F. 7. Establish a network of relationships, including internal and external collaborators.
F. 8. Evaluate organizational performance in relation to strategic and defined goals.

G. PROFESSIONALISM AND ETHICS

G. 1. Manage potential conflicts of interest encountered by practitioners, researchers, and organizations.
G. 2. Differentiate among the administrative, legal, ethical, and quality assurance dimensions of research and practice.
G. 3. Design strategies for resolving ethical concerns in research, law, and regulations.
G. 4. Develop tools that protect the privacy of individuals and communities involved in health programs, policies, and research.
G. 5. Prepare criteria for which the protection of the public welfare may transcend the right to individual autonomy.
G. 6. Assess ethical considerations in developing communications and promotional initiatives.
G. 7. Demonstrate cultural sensitivity in ethical discourse and analysis.

H. COMMUNITY HEALTH SCIENCES

H. 1. Identify key public health issues within a community and assess the social ecological context in which these issues take place.

H. 2. Utilize major concepts, methods, and theories in the social and behavioral sciences to improve understanding of public health issues and to design programs intended to ameliorate public health problems.

H. 3. Lead efforts to design, implement, and manage an intervention aimed at an identified public health problem/issue.

H. 4. Design a program evaluation, analyze the results, and synthesize the findings.

H. 5. Effectively communicate to diverse audiences issues related to program planning, implementation, and evaluation.

I. ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES

I. 1. Assess and investigate the direct and indirect human, ecological and safety effects of major environmental and occupational agents.

I. 2. Evaluate genetic, physiologic and psychosocial factors that affect susceptibility to adverse health outcomes following exposure to environmental hazards.

I. 3. Assess the effectiveness of federal and state regulatory programs, guidelines and authorities that control environmental health issues.

I. 4. Consider and evaluate current environmental risk assessment methods.

I. 5. Consider and evaluate approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety.

I. 6. Investigate the general mechanisms of toxicity in eliciting a toxic response to various environmental exposures.

I. 7. Delineate and investigate various risk management and risk communication approaches in relation to issues of environmental justice and equity.

I. 8. Develop and apply a testable model of environmental insult.

I. 9. Consider and evaluate social environmental factors, including socioeconomic status, that influence health behaviors and contribute to health disparities.

J. EPIDEMIOLOGY

J. 1. Identify emerging public health problems through synthesis of public health research.

J. 2. Identify critical gaps in public health knowledge.

J. 3. Demonstrate appropriate uses and interpretation of epidemiological data.

J. 4. Lead organizational decision-making and planning based on epidemiological research and design effective implementation strategies to improve public health.

J. 5. Evaluate evidence-based public health guidelines and policies.

J. 6. Interpret results of public health research.

J. 7. Prepare both written and oral reports on public health research.

J. 8. Identify ethical dilemmas in epidemiologic research and practice.

J. 9. Design epidemiologic studies that foster ethical standards for public health practice.

J. 10. Translate public health theories into practice.

K. HEALTH POLICY AND MANAGEMENT

Advocacy

K. 1. Present positions on health issues, law and policy.

K. 2. Influence health policy and program decision-making based on scientific evidence.

K. 3. Utilize consensus-building, negotiation, and conflict avoidance and resolution techniques.

K. 4. Analyze the impact of legislation, judicial opinions, regulations, and policies on population health.

K. 5. Develop evidence-based strategies for changing health law and policy.

Communication

K. 6. Guide an organization in setting communication priorities, objectives, and goals.

Community/Cultural Orientation
K. 7. Develop collaborative partnerships with communities, policy makers, and other relevant groups.
K. 8. Assess cultural, environmental, and social justice influences on the health of communities.

Critical Analysis
K. 9. Apply theoretical and evidence-based perspectives from multiple disciplines in the design and implementation of programs, policies and systems.
K. 10. Interpret quantitative and qualitative data following current scientific standards.
K. 11. Synthesize information from multiple sources for research and practice.
K. 12. Evaluate the performance and impact of health programs, policies, and systems.

Leadership
K. 13. Weigh risks, benefits, and unintended consequences of research and practice.
K. 14. Collaborate with diverse groups.
K. 15. Influence others to achieve high standards of performance and accountability.

Management
K. 16. Evaluate organizational performance in relation to strategic and defined goals.

Professionalism and Ethics
K. 17. Manage potential conflicts of interest encountered by practitioners, researchers and organizations.
K. 18. Differentiate among the administrative, legal, ethical and quality assurance dimensions of research and practice.
K. 19. Demonstrate cultural sensitivity in ethical discourse and analysis.

FACULTY

All participating faculty hold appointments at SUNY Downstate Medical Center, School of Public Health. For more details about an individual faculty member, or to view a list of part-time faculty, please consult the website: www.downstate.edu/publichealth

Aimee Afable-Munsuz, Assistant Professor, Community Health Sciences
PhD: Tulane University School of Public Health & Tropical Medicine
Post Doctoral Fellowship, University of California
MPH: Tulane University School of Public Health & Tropical Medicine

Philippe Amstislavski, Assistant Professor, Biostatistics
PhD: CUNY The Graduate School and University Center
RN: Moscow Nursing College
MEM: Yale School of Forestry and Environmental Studies
M.Arch: Rensselaer Polytechnic Institute

Karen Benker, Assistant Professor, Health Policy and Management and Associate Dean for Community Public Health Affairs
MD: University of Southern California at Los Angeles
MPH: Columbia University School of Public Health

Denise Bruno, Assistant Professor, Community Health Sciences
MD: University of Medicine and Dentistry of New Jersey
MPH: Harvard University School of Public Health

Dee Burton, Associate Professor and Chair of Community Health Sciences
PhD: New School for Social Research Graduate Faculty of Political and Social Science
Post-Doctoral Fellowship: University of Southern California, Los Angeles

Daniel Ehlke, Assistant Professor, Health Policy and Management
PhD: University of Toronto
MA: Queens University

Laura Geer, Assistant Professor, Environmental and Occupational Health Sciences
PhD: Johns Hopkins University
MHS: Johns Hopkins University

Mira Grice Sheff, Assistant Professor, Environmental and Occupational Health Sciences
PhD: University of Minnesota
MS: University of Minnesota

Elizabeth Helzner, PhD, Assistant Professor, Epidemiology
PhD: University of Pittsburgh

Pascal James Imperato, SPH Dean and Distinguished Service Professor
MD: SUNY Downstate Medical Center
MPH&TM: Tulane University School of Public Health and Tropical Medicine

Michael Joseph, Assistant Professor, Epidemiology
PhD: University of Michigan School of Public Health
MPH: Yale University School of Medicine

Florence Kavaler, Professor and Chair, Health Policy and Management and
Associate Dean for Research Administration
MD: Downstate Medical Center
MS, MPH: Columbia University School of Public Health

Paul Landsbergis, Associate Professor, Environmental and Occupational Health Sciences
PhD: Columbia University
EdD: Rutgers University

Judith H. LaRosa, Vice Dean and Professor, Health Policy and Management
PhD: University of Maryland
MNEd: University of Pittsburgh

John D. Meyer, Associate Professor and Chair, Environmental and Occupational Health Sciences
MD: Cornell University Medical College
MPH: Boston University School of Public Health

Carl Rosenberg, Clinical Assistant Professor, Epidemiology and Biostatistics
PhD: CUNY/Mt. Sinai School of Medicine
MS: Pennsylvania State University

Rebecca Schwartz, Assistant Professor, Community Health Sciences
PhD: University of Illinois at Chicago

Michael Szarek, Research Associate Professor and Chair, Biostatistics and Epidemiology
PhD: New York University

Michal Tamuz, Associate Professor, Health Policy and Management
PhD: Stanford University
MA: Stanford University
MSc: Tel Aviv University, Israel

Michael Walsh, Assistant Professor, Epidemiology
PhD: University of Pittsburgh
MPH: University of Illinois

Tracey Wilson, Professor, Community Health Sciences
PhD: State University of New York at Albany