



SUNY
DOWNSTATE
Medical Center

PUBLIC HEALTH FOR A GLOBAL COMMUNITY



School of Public Health Supplemental Student Handbook: 2017-2018

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.

The 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:

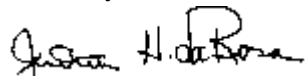
1. Change or modify its schedule of tuition and fees;
2. Withdraw, cancel, reschedule, or modify any course, program of study, degree, or any requirement or policy in connection with the foregoing, and,
3. Change or modify any academic or other policy.

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,



Judith H. LaRosa, PhD, RN
Interim Dean and Distinguished Service Professor
School of Public Health

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SCHOOL OF PUBLIC HEALTH MISSION STATEMENT, VISION AND GOALS

Vision:

Grow the SUNY Downstate School of Public Health into a nationally recognized School of Public Health that is known for:

- advancing Global Health
- creating innovative models to empower communities to address health disparities
- fostering the development of new knowledge and public health practices
- leadership in Urban and Immigrant Health
- promoting health equity
- training diverse public health professionals

Mission:

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.

Goals:

Instruction:

- 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 different settings, especially urban environments with diverse racial, ethnic, cultural, religious, and socioeconomic groups.

Research:

- 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.

Service:

- To advance the health of underserved communities, both locally and globally, through collaborative public health approaches to health promotion and disease prevention and intervention.

Professional Public Health Values:

1. Advancement of public health knowledge
2. Promotion of health and well-being
3. Prevention of disease and disability
4. Reduction of premature mortality

5. Health Equity
6. Academic excellence in the education of public health professionals
7. Academic integrity
8. Grounded scientific research in public health problems
9. Partnerships with local and regional community organizations to effect health promotion and disease prevention
10. Provision of service to local and regional populations and communities to improve health and prevent disease and disability
11. Protection of, and respect for participants involved in public health research, for example: conducting research with 'informed consent' per National Institutes of Health (NIH) guidelines
12. Compliance with Health Insurance Portability and Accountability Act (HIPAA) guidelines
13. Medical and Public Health Ethics
14. Diversity of the Student Body
15. Diversity of the Faculty and Staff
16. Community Service
17. Faculty Participation in School Governance
18. Student Participation in School Governance

SCHOOL OF PUBLIC HEALTH ADMINISTRATION

Judith H. LaRosa, PhD, RN Inter Dean, and Distinguished Service Professor	718-20-1056 B4-302
M. Monica Sweeney, MD, MPH, FACP Vice Dean for Global Engagement	718-804-7836 B4-32
Karen Benker, MD, MPH Associate Dean for Community Public Health Affairs	718-221-6194 B4-322
Michael Szarek, PhD, MS Interim Associate Dean for Research Administration	718-804-7834 BSB 4-323
TBD Associate Dean for Administration	718-270-1766 B4-316A
Lucy Grassi, BBA Budget Director	718-270-1057 B4-322
Daniel Ilyayev, M.S. Ed. Assistant Dean for Enrollment and Student Affairs	718-270-2759 B4-316B
Dorine Cooper, MA Executive Assistant	718-270-8377 B4-318
Mariecia Pook Accreditation Specialist	718-270-8801 B4-318
Lois Hahn Secretary	718-270-1056 B4-318
Evelyn Alleyne Staff Assistant/Outreach Coordinator	347-557-1110 370 Lenox Rd.

SCHOOL OF PUBLIC HEALTH DEPARTMENTS

Department of Biostatistics and Epidemiology Chair: Michael Szarek, PhD, MS Departmental Coordinator: Arlene Mbonu, MA	718-613-8376
Department of Community Health Sciences Chair: Barbara Delano, MD, MPH Departmental Coordinator: Arlene Mbonu, MA	718-613-8376
Department of Environmental and Occupational Health Sciences Chair: Laura Geer, PhD, MHS Departmental Coordinator: Francine Benjamin, MS	718-613-8780
Department of Health Policy and Management Chair: M. Monica Sweeney, MD, MPH, FACP Departmental Coordinator: Mariecia Pook	718-270-8801

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 textbooks are available for purchase at the SUNY Downstate bookstore. Students also have the option to order them on-line. 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.

A copy of each textbook will also 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

ACPH Program Transfer Credits

Transfer credits are not accepted toward the Advanced Certificate program.

MPH Program Transfer Credits

Please note that a maximum of twelve (12) *graduate level* 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. Students must seek approval for the departmental chair of their concentration, prior to registering for courses at other CHEA accredited institutions.

DrPH Program Transfer Credits

A maximum number fifteen (15) *doctoral level* 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. Students must seek approval for the departmental chair of their concentration, prior to registering for courses at other CHEA accredited institutions.

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

If the student fails to provide appropriate proof of course content equivalency and an official transcript 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 (15 CREDITS)

All students for an MPH degree, regardless of specialty, must complete 15 credits of MPH core requirements, 12 credits of the track specialty requirements, 12 credits of electives, one (1) credit of the Field Experience, and two (2) 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
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
BIOS 5202	Applied Regression Analysis	3	BIOS 5200, EPID 5200
BIOS 5203	Survival Analysis	3	BIOS 5200, EPID 5200, BIOS 5202
BIOS 5204	Statistical Computing	3	BIOS 5200, EPID 5200

ELECTIVES (12 CREDITS)

Students have a range of elective choices to complete the requirements for a BIOS MPH. All students must complete twelve (12) 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

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 (12 CREDITS)

Students have a range of elective choices to complete the requirements for a CHSC MPH. All students must complete twelve (12) 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
PUBH 5200	Introduction to Public Health	3	None
CHSC 5204	Community Organization	3	None
CHSC 5300	Introduction to Research	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 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 5311	Public Health Practice	3	None
CHSC 5312	Reading Seminar on the Social Determinants of Health	3	None
CHSC 5313	Public Health and Well-Being	3	CHSC 5200
CHSC 5314	Centering Wellness	3	
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	3	EOHS 5200
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 (12 CREDITS)

Students have a range of elective choices to complete the requirements for a BIOS MPH. All students must complete twelve (12) 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	None
EOHS 5309	Remote Sensing and Spatial Analysis	3	None
EOHS 5311	Geographic Information Systems for Global Health	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	EPID 5200
EPID 5203	Chronic Disease Epidemiology	3	EPID 5200, BIOS 5202
EPID 5205	Epidemiologic Research Methods II	3	BIOS 5200, EPID 5200, EPID 5201

EPIDEMIOLOGY (EPID) ELECTIVES (12 CREDITS)

Students have a range of elective choices to complete the requirements for a EPID MPH. All students must complete twelve (12) 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 5305	Epidemiology of Aging	3	BIOS 5200, EPID 5200
EPID 5307	Critical Approaches to the Epidemiologic Literature	3	BIOS 5200, EPID 5200, EPID 5201, EPID 5205
EPID 5308	Reproductive and Perinatal Epidemiology	3	BIOS 5200, EPID 5200
EPID 5311	The Epidemiology of Emerging Infectious Diseases	3	EPID 5200, EPID 5202

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	HPMG 5206
HPMG 5203	Health Management Concepts	3	HPMG 5206
HPMG 5204	Access, Cost and Quality of Care	3	HPMG 5206
HPMG 5207	Principles in Hospital Management	3	HPMG 5206

HEALTH POLICY AND MANAGEMENT (HPMG) ELECTIVES (12 CREDITS)

Students have a range of elective choices to complete the requirements for a HPMG MPH. All students must complete twelve (12) 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 5306	Policy Studies in Urban and Immigrant Health	3	None
HPMG 5307	Global Issues in Maternal and Child Health Policy	3	HPMG 5206
HPMG 5308	Public Health Law and Bioethics	3	None
HPMG 5309	Policy Issues in Mental Illness	3	None
HPMG 5311	International Healthcare Systems	3	None

FIELD EXPERIENCE AND THE CULMINATING EXPERIENCE:

Course #	Course Title	Credits	Pre-requisite Courses
PUBH 6500	MPH Field Experience	1	All CORE courses must be completed.
BIOS 6001	MPH Culminating Experience in Biostatistics	2	All CORE and TRACK courses must be completed.
CHSC 6001	MPH Culminating Experience in Community Health Sciences	2	All CORE and TRACK courses must be completed.
EOHS 6001	MPH Culminating Experience in Environmental and Occupational Health Sciences	2	All CORE and TRACK courses must be completed.
EPID 6001	MPH Culminating Experience in Epidemiology	2	All CORE and TRACK courses must be completed.
HPMG 6001	MPH Culminating Experience in Health Policy and Management	2	All CORE and TRACK courses must be completed.

MPH COURSE DESCRIPTIONS

REQUIRED MPH CORE COURSES (15 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.

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

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 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 5202

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 (12 credits)

Students can choose 4 elective courses from the list below. Students may also opt to choose courses from other departments to satisfy the elective requirements.

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.

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 (12 credits):

Students can choose 4 elective courses from the list below. Students may also opt to choose courses from other departments to satisfy the elective requirements.

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.

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 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 5312: Reading Seminar on the Social Determinants of Health (3)

The social, economic, political, and physical conditions in which we live have an enormous impact on public health. These conditions, which are called the social determinants of health, include distribution of power and resources within and across populations, and account for enormous health disparities domestically and globally. In this course, we will engage in an in-depth exploration of the social determinants of health through the critical reading and analysis of books that focus on one or more of these determinants, and will discuss how public health efforts can be leveraged to improve those social conditions that impact health and quality of life.

CHSC 5313: Public Health and Well-Being (3)

The World Health Organization defines health as a state of complete physical, mental and social well-being. Policy makers, behavioral economists, public health professionals, health care experts, and others have begun to expand their focus on approaches to reducing illness and suffering to include how best to promote and support thriving and resilient communities, characterized by high levels of subjective well-being. In this course, we will explore how factors such as resilience, positive affect, optimism, coping style, and social functioning are linked to individual and public health, how features of the social environment and culture impact these characteristics, and how public health professionals can contribute to the design and implementation of interventions at the individual, interpersonal, community, and policy levels in support of health promotion and overall well-being.

Prerequisite: BIOS 5200, BIOS 5202

CHSC 5314: Centering Wellness (3)

This course is focused on centering personal wellness inside and outside of the classroom. As emerging public health practitioners, we are often focused on population health. However, public health promotion and disease prevention is not only the responsibility of macro-institutions. Health is created and experienced by individuals and communities within the settings of our everyday lives—where we live, work, learn, play, pray, and love. If we are personally stressed, anxious, depressed, or fatigued, can we consider how that might impact our conceptions and pursuit of greater physical, mental, spiritual, and community health and wellness? As the adage from the 1960s Second-Wave Feminist Movement goes, ‘the personal is political.’ This course presents the creative arts as tools to promote health and to manage the effects of illness, stress, and trauma. Students will practice critical reading, critical analysis, and creative writing exercises and engage in activities to unlearn and heal oppressive attitudes and behaviors, improve mental and physical health, and promote healthy development. Concepts, such as the life course perspective, cultural humility, public health critical race praxis, intersectionality, and social capital, will be introduced side-by-side with reading and writing works of poetry, memoir, and fiction. Finally, the students will work in groups to study a health issue and produce a creative work and presentation on the topic.

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.

Prerequisite: EOHS 5200

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 (12 credits)

Students can choose 4 elective courses from the list below. Students may also opt to choose courses from other departments to satisfy the elective requirements.

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 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 5307: Occupational & Environmental Epidemiology (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, BIOS 5200, EPID 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 5309: Remote Sensing and 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.

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.

EOHS 5311: Geographic Information Systems for Global 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.

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: 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: 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 (12 credits):

Students can choose 4 elective courses from the list below. Students may also opt to choose courses from other departments to satisfy the elective requirements.

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 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 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 5308: Reproductive and Perinatal Epidemiology

Reproductive and perinatal epidemiology is a profoundly important aspect of public health. Both the reproductive and perinatal time periods set the pace not only for immediate birth outcomes, but also health over the life span. This reproductive and perinatal epidemiology course covers broad reproductive and perinatal health issues from the pre-conception, prenatal, delivery and post-natal periods and emphasizes health issues affecting both women and infants. Topics of discussion include disparities between various population groups, male and female fertility, fetal growth, maternal and infant morbidity and mortality, study designs and causal inference.

Prerequisites: BIOS 5200, EPID 5200

EPID 5311: The Epidemiology of Emerging Infectious Diseases (3)

This course explores the landscapes of emerging infectious diseases in several varied geographies and ecologies. We first explore the biologic, ecologic, physical, and social concepts of emerging and re-emerging infections. We then identify and apply methodology relevant to the surveillance and investigation of such infections. Several case studies of emerging/re-emerging infectious diseases will be used to develop techniques for applied infectious disease epidemiology specific to the unique context of these emergent infections. Some examples may include dengue fever, Lyme disease, West Nile virus, pandemic influenza, severe acute respiratory syndrome (SARS), extensively drug-resistant tuberculosis (XDR-TB), methicillin-resistant staphylococcus aureus (MRSA), hemorrhagic fevers, Henipavirus infections, and measles. All techniques are grounded in a landscape epidemiology approach to infectious disease, which recognizes spatial and ecologic parameters as critical to the etiologic understanding of these important diseases. The relationships between humans and the environment, humans and animals (both wild and domestic), and humans and humans, will be explored in both urban and rural contexts to identify critical epidemiologic features that can be exploited by pathogens to cause disease.

Prerequisites: EPID 5200, EPID 5202

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.

Prerequisite: HPMG 5206.

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.

Prerequisite: HPMG 5206.

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.

Prerequisite: HPMG 5206.

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.

Prerequisite: *HPMG 5206.*

HEALTH POLICY AND MANAGEMENT ELECTIVE COURSES (12 credits)

Students can choose 4 elective courses from the list below. Students may also opt to choose courses from other departments to satisfy the elective requirements.

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 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.

Prerequisite: *HPMG 5206.*

HPMG 5308: Public Health Law and Bioethics (3)

This course explores the basic tenets of bioethics along with basic principles of laws pertaining to public health. Practical applications of these foundational principles will be explored and demonstrated using actual cases, real-life scenarios requiring critical thinking and other assignments which call upon a student's ability to balance established rules and accepted practices with their personal opinions.

Throughout the course distinctions will be made between health law and public health law and the relevance to various professional practices will be delineated. Contemporary challenges in health care and public health delivery, especially in urban settings that address immigrant issues, will be emphasized. The students will emerge from the course with a better understanding of the legal milieu in which we must function. Students also will be better prepared to enter public health-related practice with a basic understanding of bioethical principles relevant to contemporary challenges in public health and health care practice.

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

HPMG 5309: Policy Issues in Mental Illness (3)

This entirely on-line and asynchronous course over a semester prepares the student to participate as a public health professional in analysis and advocacy for effective public health policies on the major mental illnesses globally: schizophrenia, bipolar disorder, and major depression. The course emphasizes current scientific understanding of these disorders within a social-ecological framework. The class analyzes past and current federal and state laws on treatment, income support, and criminal justice involving the mentally ill in terms of effectiveness and social justice. A special focus of the class is policy implications for urban and immigrant populations. The class also compares U.S. practices with emerging global health models of best practices.

HPMG 5311: International Healthcare Systems (3)

The goal of this course is to compare and consider the different aspects of international health care systems. The course will examine health care, financing, organization, governance, coordination, disparities, and practice.

At the conclusion of the course, you should be able to:

- Identify the main components and issues of each organization, financing, and delivery of health services in the particular country
- Discuss the policy process for each system and compare it with selected others
- Identify key factors and their impact on the different health care systems
- Evaluate and compare the key aspects of each system

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.

MPH students must maintain continuous registration every semester from the start of the program until completion of the CE. Students must continue to register for the CE (and pay) each semester until successful completion of the CE.

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 four (4) to eight (8) years of 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	Prerequisites
CHSC 7300	Theories of Health Behavior	3	
CHSC 7301	Psychosocial and Behavioral Epidemiology	3	BIOS 5204
CHSC 7302	Health Communication Theory and Practice	3	
CHSC 7303	Survey Research Methods	3	EPID 5200
CHSC 7304	Culture, Class, and Ethnicity in Health Promotion	3	
CHSC 7305	International Case Studies in Community Health	3	
CHSC 7306	Advanced Seminar in Urban 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	Prerequisites
EOHS 7202	Advanced Topics in Risk Assessment and Management (Available to DrPH-EOHS students only)	3	
EOHS 7203	Environmental Health Policy and Management Systems	3	
EOHS 7205	Safety of the Food Supply	3	
EOHS 7300	Advanced Topics in Occupational Health	3	EOHS 5202, BIOS 7200, PUBH 7201

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	Prerequisites
EOHS 7204	Organization of Work, Occupational Stress, and Health	3	EOHS 7300, BIOS 7200, PUBH 7201
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	
PUBH 7501	Writing Scientific Papers	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	Prerequisites
EPID 7201	Advanced Epidemiological Research Methods I	3	BIOS 7200
EPID 7202	Advanced Epidemiological Research Methods II	3	BIOS 7200
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	Prerequisites
BIOS 7301	Applied Statistics and Data Mining	3	
BIOS 7302	Advanced Categorical Data Analysis	3	BIOS 7201
BIOS 7303	Advanced Survival Analysis	3	BIOS 7201
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	

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

COMMUNITY HEALTH SCIENCES 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.

Prerequisites: BIOS 5204

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.

Prerequisites: EPID 5200 (for MPH students only)

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.

CHSC 7306: Advanced Seminar in Urban Health

The world has experienced unprecedented urban growth in the last decades. By 2050, it is projected that 70% of the world will be living in cities. This course is an in-depth study of cities as complex environments where common public health issues require more nuanced, multi-disciplinary, multi-sector frameworks and approaches. Course readings are chosen to encourage a critical discussion of the social determinants of health unique to urban settings from a demographic, geo-spatial and urban sociological perspective, highlighting the relevance of urban form, demography, race/ethnic relations, and income inequality. It will explore the complexities of cities and implications for health through an analysis of several contemporary case studies including transnational healthcare for undocumented immigrants, the Dutch URBAN40 study on urban greening and health, and SUNY Downstate Vogue Theory, a sexual health promotion program designed for MSM youth of color. Students will develop expertise on a contemporary public health challenge of interest and critically apply evidence and urban social theory to the formulation of solutions to this challenge.

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.

Available to DrPH-EOHS students only

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.

Prerequisites: EOHS 5202, BIOS 7200, PUBH 7201, or by instructor permission

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.

Prerequisites: EOHS 7300, BIOS 7200, PUBH 7201, or by instructor permission

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.

PUBH 7501: Writing Scientific Papers (1-3)

Enables doctoral students to further develop skills in writing successful scientific paper, that is, papers that are accepted by peer-reviewed journals. Confers skills in identifying and using online information sources. Informs participants on different publication options, including open source journals. Explains NIH requirements for notification and access. Through problem-based learning and review of successful scientific papers, conveys the elements of successful scientific papers, including formats, data presentation, citations and acknowledgements.

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.

Prerequisites: BIOS 7200

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).

Prerequisites: BIOS 7200

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.

BIOS 7302: Advanced 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 advanced problems related to epidemiology, public health and medicine. Advanced 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 SAS statistical package for the advanced topics covered in the course.

Prerequisites: BIOS 7201

BIOS 7303: Advanced Survival Analysis (3)

This course covers the basic theoretical aspects and advanced applications of various models to analyze "time to event" data. Basic advanced concepts such as the survival function, hazard function, right and interval censoring, and common nonparametric and parametric methods and models for analyzing survival data will be covered. The proportional hazards (PH) model with fixed and time dependent covariates, the stratified PH model, sample size calculations, and regression diagnostics for survival models will also be covered. Students will be introduced to the SAS statistical package for the advanced topics covered in the course.

Prerequisites: BIOS 7201

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.

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:

A student is eligible to sit for the Qualifying Exam only after successful completion of all core and concentration courses as well as the Field Experience.

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:

To maintain matriculation, all doctoral students who are scheduled to sit for the DrPH Qualifying Exam must register for 1 dissertation credit in that specific semester.

If a student fails one or both sections of the exam, s/he will be expected to register for another dissertation credit the following semester.

The exam will be scheduled for two days (separated by 1 week) at the end of the Fall and Spring semesters. 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 Assistant Dean for Enrollment and 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)

Students should refer to the DrPH Dissertation Handbook for complete details.

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:

PUBH 8001: DrPH Dissertation consists of 12 credits.

DrPH students must maintain continuous registration every semester from the start of the program until completion of the doctoral dissertation. After completion of all coursework, students must register each semester for at least one (1) credit of the Doctoral Dissertation while preparing for the Qualifying Exam (QE) and working on their Oral Defense (OD). Upon successful completion of both, the QE and the OD, students must continue to register for 1 – 3 Dissertation credits until the full 12 credits have been completed.

If the student has finished all 12 credits and still has not completed and defended the dissertation, then the student must continue to sign up for 1 dissertation credit per semester until the dissertation study has been successfully completed.

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.

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, 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

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, Associate Professor, Community Health Sciences

MD: University of Medicine and Dentistry of New Jersey

MPH: Harvard University School of Public Health

Barbara Delano, Chair and Distinguished Service Professor, Community Health Sciences

MD: SUNY Downstate Medical Center

MPH: University of Medicine and Dentistry of New Jersey

LeConte Dill, Assistant Professor

MPH: University of California, Los Angeles School of Public Health

DrPH: University of California, Berkeley School of Public Health

Post-Doctoral Fellowship: Satcher Health Leadership Institute, Morehouse School of Medicine

Daniel Ehlke, Assistant Professor, Health Policy and Management

PhD: University of Toronto

MA: Queens University

Laura Geer, Chair and Associate Professor, Environmental and Occupational Health Sciences

PhD: Johns Hopkins University

MHS: Johns Hopkins University

Usha Govindarajulu, Assistant Professor, Epidemiology and Biostatistics

Post-doctorate: Harvard University: School of Public Health

PhD: Boston University

MS: George Washington University

Elizabeth Helzner, PhD, Assistant Professor, Epidemiology

PhD: University of Pittsburgh

Lori Hoepner, DrPH, MPH, Assistant Professor, Environmental and Occupational Health Sciences

DrPH: Columbia University School of Public Health

MPH: Tulane University School of Public Health and Tropical Medicine

Pascal James Imperato, SPH Founding Dean, Dean Emeritus and Distinguished Service Professor

MD: SUNY Downstate Medical Center

MPH&TM: Tulane University School of Public Health and Tropical Medicine

Michael Joseph, Associate Professor, Epidemiology

PhD: University of Michigan School of Public Health

MPH: Yale University School of Medicine

Sergios-Orestis Kolokotronis, Assistant Professor, Epidemiology

PhD: Columbia University

MPhil & MA: Columbia University

Adv. Certif. in Environmental Policy: Columbia University

BS: Université Paris-Sud XI

Paul Landsbergis, Associate Professor, Environmental and Occupational Health Sciences

PhD: Columbia University

EdD: Rutgers University

Judith H. LaRosa, SPH Interim Dean, and Distinguished Service Professor, Health Policy and Management

PhD: University of Maryland

MNEd: University of Pittsburgh

Simone Reynolds, Assistant Professor, Epidemiology and Biostatistics

PhD: University of Pittsburgh, Graduate School of Public Health

MPH: New York Medical College School of Public Health

Carl Rosenberg, Clinical Assistant Professor, Epidemiology and Biostatistics

PhD: CUNY/Mt. Sinai School of Medicine

MS: Pennsylvania State University

M. Monica Sweeney, Vice Dean for Global Engagement, Clinical Professor and Chair, Health Policy and Management

Michael Szarek, Professor and Chair, Biostatistics and Epidemiology

PhD: New York University

Leone Waltrous, Assistant Professor, Health Policy and Management

MD: Howard University

MPH: SUNY Downstate Medical Center

Tracey Wilson, Professor, Community Health Sciences

PhD: State University of New York at Albany

Overarching MPH Degree Competencies

1. Describe basic concepts of probability, random variation and commonly used statistical probability distributions.
2. Apply common statistical methods for inference.
3. Describe how the allocation of social and community factors impacts the understanding of public health problems in urban and immigrant populations and guides community engaged research and practice.
4. Identify basic theories, concepts, and models from a range of social and behavioral disciplines that are used in public health research and practice at multiple levels.
5. Integrate and synthesize theory, evidence and local knowledge to inform the conceptualization, design and evaluation of health promotion programs in urban and immigrant settings.
6. Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.
7. Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety.
8. Describe a public health problem in terms of magnitude, person, time, and place, contextualized in urban and immigrant landscapes.
9. Evaluate the strengths and limitations of epidemiologic studies and reports, and draw appropriate inferences from epidemiologic data.
10. Identify the main components and issues of the organization, financing, policy formation, and delivery of healthcare and public health services in the US.
11. Describe the legal and ethical bases for public health and health services for improving the health of populations.

Overarching MPH Competencies by Core Course

Divided Among 5 Core MPH Courses

BIOS 5200: Principles of Biostatistics

1. Describe basic concepts of probability, random variation and commonly used statistical probability distributions.
2. Apply common statistical methods for inference.

CHSC 5200: Health Behavior and Risk Reduction

1. Describe how the allocation of social and community factors impacts the understanding of public health problems in urban and immigrant populations and guides community engaged research and practice.
2. Identify basic theories, concepts, and models from a range of social and behavioral disciplines that are used in public health research and practice at multiple levels.
3. Integrate and synthesize theory, evidence and local knowledge to inform the conceptualization, design and evaluation of health promotion programs in urban and immigrant settings.

EOHS 5200: Issues in Environmental Health

1. Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.
2. Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety.

EPID 5200: Principles of Epidemiology

1. Describe a public health problem in terms of magnitude, person, time, and place, contextualized in urban and immigrant landscapes.
2. Evaluate the strengths and limitations of epidemiologic studies and reports, and draw appropriate inferences from epidemiologic data.

HPMG 5206: Introduction to Health Policy and Management

1. Identify the main components and issues of the organization, financing, policy formation, and delivery of healthcare and public health services in the US.
2. Describe the legal and ethical bases for public health and health services for improving the health of populations.

MPH Biostatistics Concentration Competencies

1. Demonstrate an understanding of the theoretical basis of statistical methods for inference.
2. Apply appropriate statistical methods for inference based on stated research hypotheses.
3. Demonstrate proficiency in using standard statistical software packages to perform data analyses.
4. Demonstrate proficiency in constructing and managing databases from epidemiological studies using statistical software.
5. Apply knowledge of study design and statistical methods to critically appraise research literature.
6. Demonstrate effective written and oral communication skills when describing biostatistical methods, results, and interpretation to different audiences of public health professionals.

MPH Biostatistics Concentration Competencies

BIOS 5201: Categorical Data Analysis

1. Demonstrate an understanding of the theoretical basis of statistical methods for inference.
2. Apply appropriate statistical methods for inference based on stated research hypotheses.
3. Demonstrate proficiency in using standard statistical software packages to perform data analyses.
4. Apply knowledge of study design and statistical methods to critically appraise research literature.
5. Demonstrate effective written and oral communication skills when describing biostatistical methods, results, and interpretation to different audiences of public health professionals.

BIOS 5202: Applied Regression Analysis

1. Demonstrate an understanding of the theoretical basis of statistical methods for inference.
2. Apply appropriate statistical methods for inference based on stated research hypotheses.
3. Demonstrate proficiency in using standard statistical software packages to perform data analyses.
4. Demonstrate effective written and oral communication skills when describing biostatistical methods, results, and interpretation to different audiences of public health professionals.

Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

MPH Biostatistics Concentration Competencies (continued)

BIOS 5203: Survival Analysis

1. Demonstrate an understanding of the theoretical basis of statistical methods for inference.
2. Apply appropriate statistical methods for inference based on stated research hypotheses.
3. Demonstrate proficiency in using standard statistical software packages to perform data analyses.
4. Apply knowledge of study design and statistical methods to critically appraise research literature.
5. Demonstrate effective written and oral communication skills when describing biostatistical methods, results, and interpretation to different audiences of public health professionals.

BIOS 5204: Statistical Computing

1. Demonstrate an understanding of the theoretical basis of statistical methods for inference.
2. Apply appropriate statistical methods for inference based on stated research hypotheses.
3. Demonstrate proficiency in using standard statistical software packages to perform data analyses.
4. Demonstrate proficiency in constructing and managing databases from epidemiological studies using statistical software.
5. Apply knowledge of study design and statistical methods to critically appraise research literature.
6. Demonstrate effective written and oral communication skills when describing biostatistical methods, results, and interpretation to different audiences of public health professionals.

Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

MPH Community Health Sciences Concentration Competencies

1. Recognize the importance of one's own standpoint and positions while working collaboratively with diverse communities and constituencies (e.g., organizations, agencies, practitioners, policymakers, and researchers).
2. Describe the roles of history, power, privileged, and structural inequality in driving health inequities in urban communities.
3. Critically apply traditional and contemporary methods and frameworks to evaluate the process, efficacy and sustainability of health promotion programs designed for urban and immigrant populations.
4. Effectively communicate (in oral and written formats) logic models and evaluation frameworks central to health promotion programs to lay and professional audiences.
5. Differentiate between linguistic competence, cultural competence, and health literacy and explain how increased education and awareness of each of these factors can influence the health of a population.
6. Cite examples of situations where consideration of culture-specific needs resulted in a more effective modification or adaptation of a health intervention for a specific community or population.
7. Identify critical stakeholders for the planning, implementation and evaluation of public health programs, policies and interventions in urban and immigrant populations.
8. Demonstrate an understanding of the interaction of race/ethnicity/gender, and health and disease.
9. Delineate how an individual/community can affect the development of health policy at a local, state, and federal level particularly in regards to gender, race, and sexual orientation.

MPH Community Health Sciences Concentration Competencies

CHSC 5202: Issues in the Health of Immigrant Populations

1. Differentiate between linguistic competence, cultural competence, and health literacy and explain how increased education and awareness of each of these factors can influence the health of a population
2. Cite examples of situations where consideration of culture-specific needs resulted in a more effective modification or adaptation of a health intervention for a specific community or population.

CHSC 5203: Sex, Gender, Race, and Ethnicity in Health

1. Identify critical stakeholders for the planning, implementation and evaluation of public health programs, policies and interventions in urban and immigrant populations.
2. Demonstrate an understanding of the interaction of race/ethnicity/gender, and health and disease.
3. Delineate how an individual/community can affect the development of health policy at a local, state, and federal level particularly in regards to gender, race, and sexual orientation.

CHSC 5205: Urban Health Issues

1. Recognize the importance of one's own standpoint and positions while working collaboratively with diverse communities and constituencies (e.g., organizations, agencies, practitioners, policymakers, and researchers).
2. Describe the roles of history, power, privileged, and structural inequality in driving health inequities in urban communities.

CHSC 5206: Program, Planning, and Evaluation

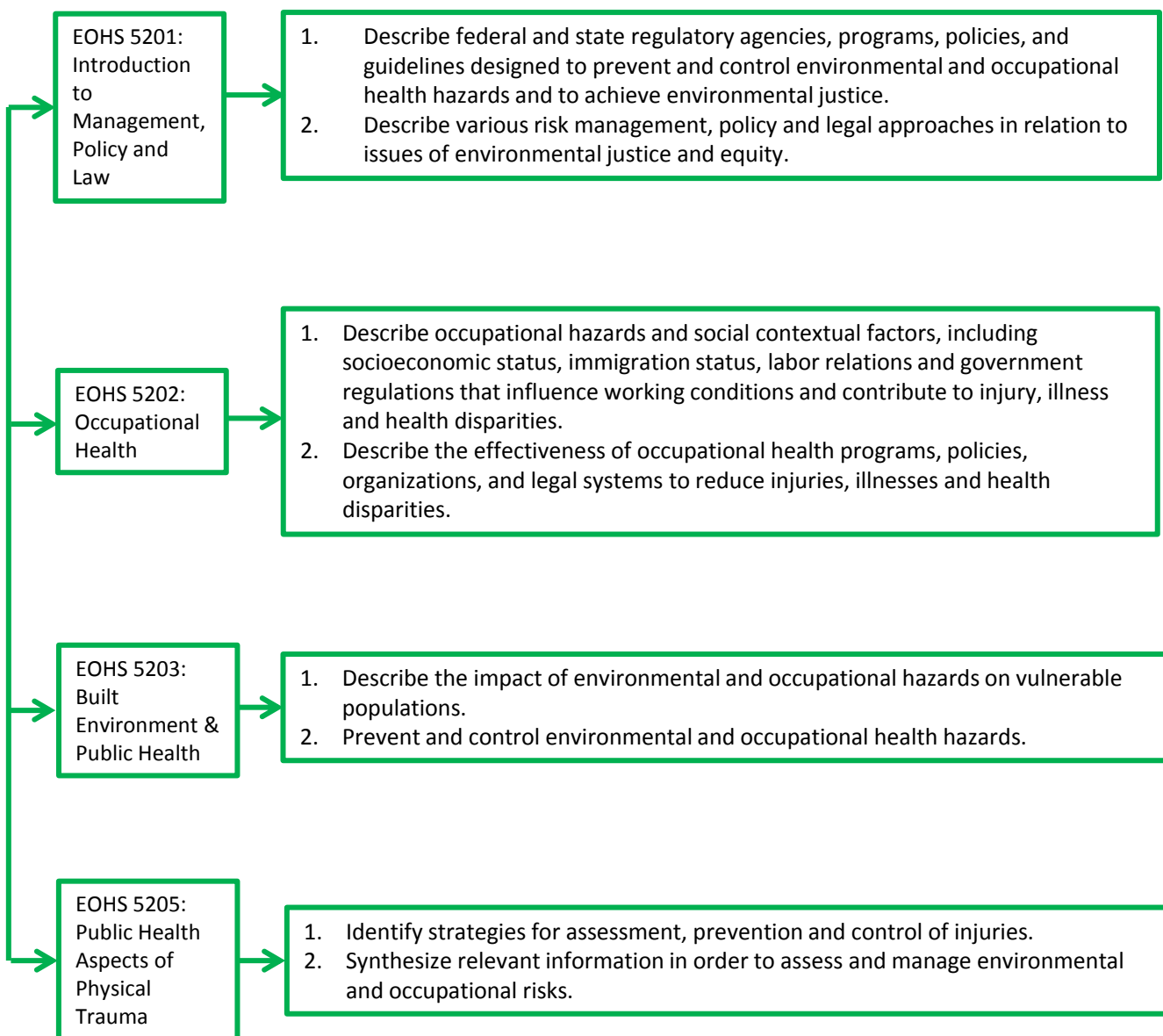
1. Critically apply traditional and contemporary methods and frameworks to evaluate the process, efficacy and sustainability of health promotion programs designed for urban and immigrant populations.
2. Effectively communicate (in oral and written formats) logic models and evaluation frameworks central to health promotion programs to lay and professional audiences.

Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

MPH Environmental and Occupational Health Sciences Concentration Competencies

1. Describe federal and state regulatory agencies, programs, policies, and guidelines designed to prevent and control environmental and occupational health hazards and to achieve environmental justice.
2. Describe various risk management, policy and legal approaches in relation to issues of environmental justice and equity.
3. Describe occupational hazards and social contextual factors, including socioeconomic status, immigration status, labor relations and government regulations that influence working conditions and contribute to injury, illness and health disparities.
4. Describe the effectiveness of occupational health programs, policies, organizations, and legal systems to reduce injuries, illnesses and health disparities.
5. Describe the impact of environmental and occupational hazards on vulnerable populations.
6. Prevent and control environmental and occupational health hazards.
7. Identify strategies for assessment, prevention and control of injuries.
8. Synthesize relevant information in order to assess and manage environmental and occupational risks.

MPH Environmental and Occupational Health Sciences Concentration Competencies



Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

MPH Epidemiology Concentration Competencies

1. Identify types and sources of data used in epidemiologic research, emphasizing urban and immigrant health.
2. Develop a scientific hypothesis and design an appropriate epidemiologic study to assess the research question.
3. Calculate epidemiologic measures of occurrence and association.
4. 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.
5. Evaluate the strengths and weaknesses of major descriptive and analytic design strategies used in epidemiologic research.
6. Explain the policy implications of epidemiologic research findings.
7. Use statistical software packages for data processing, management, and descriptive and inferential analyses.
8. Effectively communicate epidemiologic research findings orally and in writing, to lay and professional audiences.
9. Comprehend and apply basic ethical and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiologic data.

MPH Epidemiology Concentration Competencies

EPID 5201: Epidemiologic Research Methods

1. Identify types and sources of data used in epidemiologic research, emphasizing urban and immigrant health.
2. Develop a scientific hypothesis and design an appropriate epidemiologic study to assess the research question.
3. Calculate epidemiologic measures of occurrence and association.
4. Evaluate the strengths and weaknesses of major descriptive and analytic design strategies used in epidemiologic research.
5. Use statistical software packages for data processing, management, and descriptive and inferential analyses.
6. Effectively communicate epidemiologic research findings orally and in writing, to lay and professional audiences.
7. Comprehend and apply basic ethical and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiologic data.

EPID 5202: Infectious Disease Epidemiology

1. Identify types and sources of data used in epidemiologic research, emphasizing urban and immigrant health.
2. Calculate epidemiologic measures of occurrence and association.
3. 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.
4. Evaluate the strengths and weaknesses of major descriptive and analytic design strategies used in epidemiologic research.
5. Explain the policy implications of epidemiologic research findings.
6. Comprehend and apply basic ethical and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiologic data.

Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

MPH Epidemiology Concentration Competencies (continued)

EPID 5203:
Chronic
Disease
Epidemiology

1. Identify types and sources of data used in epidemiologic research, emphasizing urban and immigrant health.
2. Calculate epidemiologic measures of occurrence and association.
3. 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.
4. Evaluate the strengths and weaknesses of major descriptive and analytic design strategies used in epidemiologic research.
5. Explain the policy implications of epidemiologic research findings.

EPID 5205:
Epidemiologic
Research
Methods II

1. Identify types and sources of data used in epidemiologic research, emphasizing urban and immigrant health.
2. Develop a scientific hypothesis and design an appropriate epidemiologic study to assess the research question.
3. Calculate epidemiologic measures of occurrence and association.
4. Use statistical software packages for data processing, management, and descriptive and inferential analyses.
5. Effectively communicate epidemiologic research findings orally and in writing, to lay and professional audiences.

Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

MPH Health Policy and Management Concentration Competencies

1. Effectively manage health programs and projects .
2. Apply principles and methods of health policy development and analysis to the examination of key public health issues.
3. Advocate effectively for the needs of urban, immigrant, and other vulnerable populations in health policy and health services.
4. Communicate orally and in writing health policy and management issues using appropriate channels and technologies.
5. In collaboration with priority populations, identify, analyze, and respond to factors impacting the health of diverse communities.
6. Analyze the political context and the stakeholders that collectively serve to influence, shape, and implement policies.

MPH Health Policy and Management Concentration Competencies

HPMG 5202: Health Care Advocacy and Politics

1. Apply principles and methods of health policy development and analysis to the examination of key public health issues.
2. Advocate effectively for the needs of urban, immigrant, and other vulnerable populations in health policy and health services.
3. Communicate orally and in writing health policy and management issues using appropriate channels and technologies.
4. Analyze the political context and the stakeholders that collectively serve to influence, shape, and implement policies.

HPMG 5203: Health Management Concepts

1. Effectively manage health programs and projects .
2. Advocate effectively for the needs of urban, immigrant, and other vulnerable populations in health policy and health services.
3. Communicate orally and in writing health policy and management issues using appropriate channels and technologies.
4. In collaboration with priority populations, identify, analyze, and respond to factors impacting the health of diverse communities.

HPMG 5204: Access, Cost and Quality of Care

1. Apply principles and methods of health policy development and analysis to the examination of key public health issues.
2. Advocate effectively for the needs of urban, immigrant, and other vulnerable populations in health policy and health services.
3. Communicate orally and in writing health policy and management issues using appropriate channels and technologies.
4. Analyze the political context and the stakeholders that collectively serve to influence, shape, and implement policies.

HPMG 5207: Principles in Hospital Management

1. Effectively manage health programs and projects .
2. Advocate effectively for the needs of urban, immigrant, and other vulnerable populations in health policy and health services.
3. Communicate orally and in writing health policy and management issues using appropriate channels and technologies.

Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

Overarching DrPH Degree Competencies

1. Apply the theories and principles of biostatistics and epidemiology to the identification, classification and analysis of a public health issue.
2. Describe key characteristics of observational and experimental studies regarding subject selection, data collection, and analysis.
3. Synthesize and critically appraise published, public health research literature , specifically in urban and immigrant health.
4. Develop goals, timelines, funding alternatives, and other strategies for influencing policy initiatives.
5. Assess the impact of policy, including legislation, judicial opinions, and regulations, on population health.
6. Apply theoretical and evidence-based perspectives from multiple disciplines in the design and implementation of programs, policies, and systems.
7. Manage potential conflicts of interest encountered by practitioners, researchers, and organizations.
8. Demonstrate cultural sensitivity in conducting ethical data collection and analysis.
9. Analyze research design using qualitative data for program planning.

Overarching DrPH Degree Competencies

Divided Among 4 Core DrPH Courses

BIOS 7200: Quantitative Research Methods for Public Health Practice

1. Apply the theories and principles of biostatistics and epidemiology to the identification, classification and analysis of a public health issue.
2. Describe key characteristics of observational and experimental studies regarding subject selection, data collection, and analysis.
3. Synthesize and critically appraise published, public health research literature, specifically in urban and immigrant health.

PUBH 7200: Public Health Policy and Politics Seminar

1. Develop goals, timelines, funding alternatives, and other strategies for influencing policy initiatives.
2. Assess the impact of policy, including legislation, judicial opinions, and regulations, on population health.

HPMG 7200: Public Health Management and Ethics

1. Apply theoretical and evidence-based perspectives from multiple disciplines in the design and implementation of programs, policies, and systems.
2. Manage potential conflicts of interest encountered by practitioners, researchers, and organizations.

PUBH 7201: Study Design in Public Health

1. Apply the theories and principles of biostatistics and epidemiology to the identification, classification and analysis of a public health issue.
2. Describe key characteristics of observational and experimental studies regarding subject selection, data collection, and analysis.
3. Synthesize and critically appraise published, public health research literature, specifically in urban and immigrant health.
4. Demonstrate cultural sensitivity in conducting ethical data collection and analysis.
5. Analyze research design using qualitative data for program planning.

DrPH Community Health Sciences Competencies

1. Assess cultural, environmental, and social justice influences on the health of communities.
2. Demonstrate cultural sensitivity in ethical discourse and analysis.
3. Conduct community-engaged participatory intervention and research projects.
4. Effectively collaborate with communities, policy makers, and other relevant groups to design applied public health intervention and research projects.
5. Utilize planning models to apply theory and evidence to the planning of community-engaged public health intervention and research projects.
6. Using contemporary evaluation frameworks, articulate the strengths and limitations of experimental designs used to evaluate health promotion programs designed for urban and immigrant populations.
7. Identify diverse stakeholders (from private and public sectors) critical to the sustainability and institutionalization of health promotion programs in urban and immigrant settings.
8. Develop measurable evaluation goals and timelines required for the successful evaluation of health promotion programs in urban and immigrant settings.
9. Demonstrate leadership when communicating (in oral and written formats) logic models and evaluation frameworks central to health promotion programs to lay and professional audiences.
10. Using major concepts, methods and theories in the social and behavioral sciences, develop an in-depth understanding of a key public health issue within a community and design a program or intervention that will ameliorate this public health problem.
11. Effectively communicate efforts to design, implement, and manage an intervention aimed at an identified public health problem issue to diverse audiences.

DrPH Community Health Sciences Competencies

CHSC 7201: Qualitative Research Methods for Public Health Practice

1. Assess cultural, environmental, and social justice influences on the health of communities.
2. Demonstrate cultural sensitivity in ethical discourse and analysis.
3. Conduct community-engaged participatory intervention and research projects.

CHSC 7202: Methods of Community Intervention and Research

1. Effectively collaborate with communities, policy makers, and other relevant groups to design applied public health intervention and research projects.
2. Utilize planning models to apply theory and evidence to the planning of community-engaged public health intervention and research projects.

CHSC 7203: Program Evaluation: Theory, Practice, and Research

1. Using contemporary evaluation frameworks, articulate the strengths and limitations of experimental designs used to evaluate health promotion programs designed for urban and immigrant populations.
2. Identify diverse stakeholders (from private and public sectors) critical to the sustainability and institutionalization of health promotion programs in urban and immigrant settings.
3. Develop measurable evaluation goals and timelines required for the successful evaluation of health promotion programs in urban and immigrant settings.
4. Demonstrate leadership when communicating (in oral and written formats) logic models and evaluation frameworks central to health promotion programs to lay and professional audiences.

CHSC 7204: Health Promotion Seminar

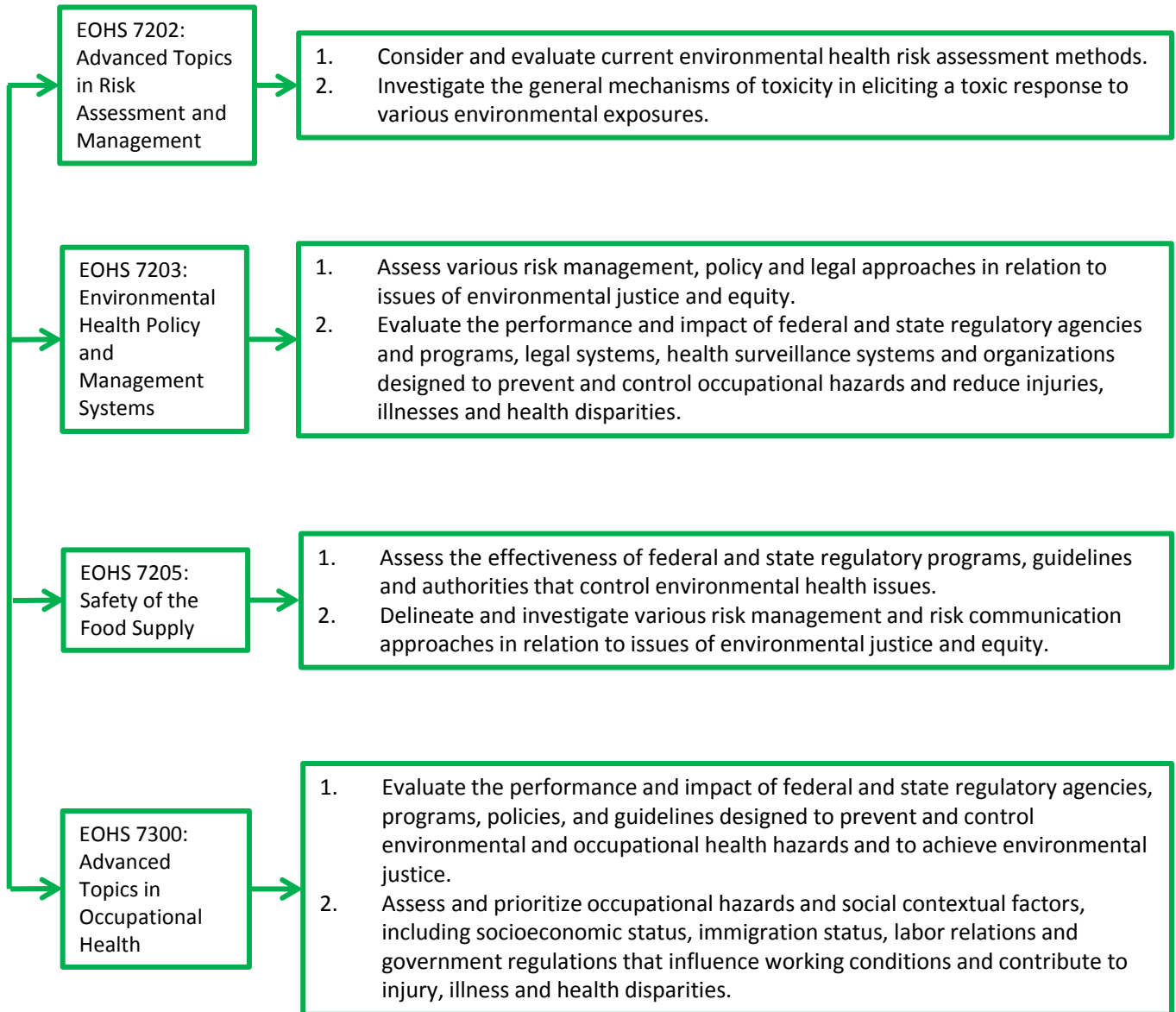
1. Using major concepts, methods and theories in the social and behavioral sciences, develop an in-depth understanding of a key public health issue within a community and design a program or intervention that will ameliorate this public health problem.
2. Effectively communicate efforts to design, implement, and manage an intervention aimed at an identified public health problem issue to diverse audiences.

Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

DrPH Environmental and Occupational Health Sciences Competencies

1. Consider and evaluate current environmental health risk assessment methods.
2. Investigate the general mechanisms of toxicity in eliciting a toxic response to various environmental exposures.
3. Assess various risk management, policy and legal approaches in relation to issues of environmental justice and equity.
4. Evaluate the performance and impact of federal and state regulatory agencies and programs, legal systems, health surveillance systems and organizations designed to prevent and control occupational hazards and reduce injuries, illnesses and health disparities.
5. Assess the effectiveness of federal and state regulatory programs, guidelines and authorities that control environmental health issues.
6. Delineate and investigate various risk management and risk communication approaches in relation to issues of environmental justice and equity.
7. Evaluate the performance and impact of federal and state regulatory agencies, programs, policies, and guidelines designed to prevent and control environmental and occupational health hazards and to achieve environmental justice.
8. Assess and prioritize occupational hazards and social contextual factors, including socioeconomic status, immigration status, labor relations and government regulations that influence working conditions and contribute to injury, illness and health disparities.

DrPH Environmental and Occupational Health Sciences Competencies

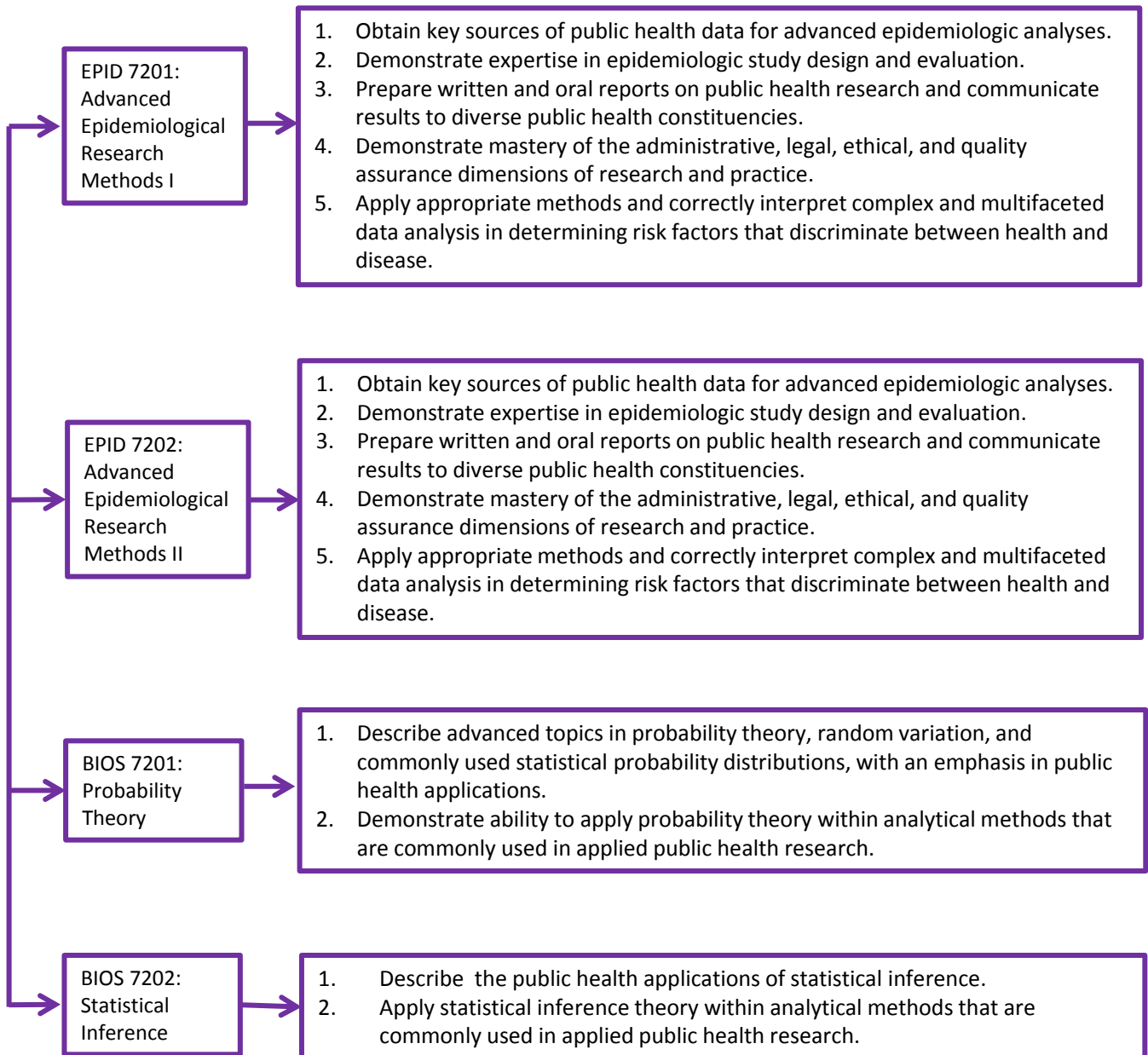


Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

DrPH Epidemiology Competencies

1. Obtain key sources of public health data for advanced epidemiologic analyses.
2. Demonstrate expertise in epidemiologic study design and evaluation.
3. Prepare written and oral reports on public health research and communicate results to diverse public health constituencies.
4. Demonstrate mastery of the administrative, legal, ethical, and quality assurance dimensions of research and practice.
5. Apply appropriate methods and correctly interpret complex and multifaceted data analysis in determining risk factors that discriminate between health and disease.
6. Describe advanced topics in probability theory, random variation, and commonly used statistical probability distributions, with an emphasis in public health applications.
7. Demonstrate ability to apply probability theory within analytical methods that are commonly used in applied public health research.
8. Describe the public health applications of statistical inference.
9. Apply statistical inference theory within analytical methods that are commonly used in applied public health research.

DrPH Epidemiology Competencies



Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.