

# FPH - FAMILY PUBLIC HEALTH

## **FPH 7010 Urban Community Assessment and Planning Cr. 1**

Designed to provide students an introduction to the public health landscape of an urban community. Students will be traveling around an assigned community in which they will observe, assess, analyze and prioritize needs and goals, which promote public health. A group community assessment along with a presentation will include data collection, an analysis of data and prioritization of health objectives. Offered Intermittently.

**Restriction(s):** Enrollment is limited to Graduate level students.

## **FPH 7011 Foundations of Public Health Cr. 3**

Foundations of Public Health is a required course in the MPH program, covering the history, philosophy and values of the public health profession. With a focus on the core functions of public health, the course provides an overview of the science of health promotion and disease prevention, and it will introduce students to the multiple factors associated with population health and explore communication strategies to disseminate public health content to intended populations. Topics include: core functions of public health, 10 essential services of public health, morbidity, mortality, evidence-based practice, social determinants of health, health promotion, disease prevention, communication in public health practice. Offered Fall, Spring/Summer.

**Restriction(s):** Enrollment is limited to students with a major in MSW/ MPH, Public Health, Public Health Practice or Public Health Honors; enrollment is limited to Graduate level students.

## **FPH 7012 Social Justice in Public Health Cr. 3**

This course provides an introduction to the topic of public health and social justice. Students will explore social constructions of health, and examine the complex interplay of community, cultural, ethical, social, economic, environmental, political and social justice forces that shape human health globally and locally. Students will gain an understanding of how social determinants of health impact health and contribute to health disparities and health inequities. Core public health concepts of community, culture, and social justice will be explored through a critical lens, and students will examine the various ways in which these concepts can be applied to public health interventions. The course is designed to provide students with theoretical principles, methods, and skills essential to plan, implement, and evaluate community development activities. Offered Fall, Winter.

**Restriction(s):** Enrollment is limited to students with a major in MSW/ MPH, Public Health, Public Health Practice or Public Health Honors; enrollment is limited to Graduate level students.

## **FPH 7015 Biostatistics I Cr. 3**

Descriptive statistics; elementary probability; measures of central tendency and of dispersion; random samples; probability distributions including the binomial, the Poisson, the normal, the t, the chi-square, and the F; introduction to estimation and hypothesis testing; rates and vital statistics. Offered Every Term.

**Restriction(s):** Enrollment is limited to students with a major in MSW/ MPH, Public Health or Public Health Honors; enrollment is limited to Graduate level students.

## **FPH 7020 Biostatistics II Cr. 3**

The primary biostatistical tools in public health research are single-outcome, multiple-predictor methods, such as multiple linear regression for continuous outcomes and logistic regression for binary outcomes. This course is to provide introduction to multi-predictor methods, emphasizing their proper use and interpretation. The course incorporates as little theory as feasible, but illustrates the techniques using a variety of examples in the public health field. There are a number of software that can perform these analyses, such as R, SAS, STATA, and SPSS. The R is a flexible environment for data analysis and data visualization. It is open-source and has been compiled for common operating systems such as Windows, Mac (OS X), and Linux. Upon completion of this course, students will be able to perform and interpret regression modeling in epidemiological research. Offered Fall.

**Prerequisites:** FPH 7250 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

## **FPH 7100 Health Care Organization and Administration Cr. 3**

General overview of the U.S. health care system; social and organizational aspects of the delivery, financing, utilization, planning, and development of health care systems. Offered Winter, Spring/Summer.

**Restriction(s):** Enrollment is limited to students with a major in MSW/ MPH, Public Health or Public Health Honors; enrollment is limited to Graduate level students.

## **FPH 7120 Global Public Health Cr. 3**

Addresses global public health issues that impact populations, with the major objective of health equity. Public health principles and techniques are applied using a multidisciplinary approach to prevention and risk reduction strategies. Offered Spring/Summer.

**Restriction(s):** Enrollment is limited to Graduate level students.

## **FPH 7210 Research Methods for Public Health Professionals Cr. 3**

Logic of research design, formulation of public health research problems and objectives; development of hypotheses or research questions, specification of variables; sampling; issues in measurement, data collection and analyses. Emphasis will be on qualitative methods in use by public health agencies and non-profit organizations. The focus will be on data collection and analytic skills commonly used in a variety of public health settings including, health care, non-profit organizations, community groups and public health departments. Offered Fall, Spring/ Summer.

**Prerequisites:** FPH 7015 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

## **FPH 7230 Health Program Evaluation Cr. 3**

Principles and application of program evaluation in health care fields. Design, implementation, and management of evaluations in health environments. Offered Fall.

**Prerequisites:** FPH 7011 with a minimum grade of B, FPH 7012 with a minimum grade of B, and FPH 7210 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

## **FPH 7240 Epidemiology Cr. 3**

Epidemiologist's task list; research of problems without known etiology; infectious and non-infectious models; examination of current problems. Offered Every Term.

**Restriction(s):** Enrollment is limited to students with a major in MSW/ MPH, Public Health, Public Health Practice or Public Health Honors; enrollment is limited to Graduate level students.

**FPH 7241 Epidemiology of Aging Cr. 3**

This discussion-based graduate seminar is focused on the epidemiology of aging from a public health perspective. The objective is to introduce students to theoretical and empirical population health and aging research with an emphasis given to research utilizing epidemiologic methods and findings. Topics covered include epidemiologic studies of disease, cognition, and functional status in late-life. Attention will also be given to possible mechanisms and disparities underlying these population patterns of health and aging. By exposing students to key trends in aging, students will also become familiar with the major medical and public health challenges associated with the aging of the population. Readings for this course are primarily drawn from U.S. epidemiologic research, but also include readings from other fields and countries examining population health and aging. Offered Winter.

**Prerequisite:** FPH 7015 with a minimum grade of B and FPH 7240 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7250 Health Data Analytics Cr. 3**

This course introduces students to descriptive and analytic strategies that are used to study the distribution, determinants and control of health-related states and events in populations. First, the historical evolution of key concepts is overviewed. Second, critical reading guidelines are discussed. Third, students are introduced to different applications (i.e., surveillance, program evaluation, clinical, social, environmental and economic) and emerging strategies (e.g., precision public health). Throughout the course, examples relative to social determinants of urban health are emphasized. Offered Spring/Summer.

**Prerequisites:** FPH 7350 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7260 Epidemiologic Methods Cr. 2**

Methodologic concepts underlying the science of epidemiology; conduct and interpretation of epidemiologic studies. Emphasis on elements of observational study design, data analysis, and inference, including issues related to causation, bias, and confounding. Offered Intermittently.

**Prerequisites:** FPH 7015 with a minimum grade of B and FPH 7240 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7270 Applied Research Methods in Urban Public Health Cr. 3**

Focuses on applying quantitative methods to multiple data sets to answer analytic questions, completion of an individualized small project from hypothesis to methods to analysis and discussion that utilizes urban health focused data provided to students. Qualitative methods will be included. Offered Intermittently.

**Prerequisites:** FPH 7015 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7280 Public Health Community Level Intervention Science Cr. 3**

Focuses on intervention science as it pertains to improving public health, with an emphasis on intervening at the community and institutional rather than individual level. The course focuses on systematic, theoretical, and model-driven approaches for developing, implementing, and evaluating evidence-based public health interventions in community settings. Offered Fall.

**Prerequisites:** FPH 7011 with a minimum grade of B, FPH 7012 with a minimum grade of B, and FPH 7210 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7300 Public Health Policy Cr. 3**

Concepts, issues, and problems in population health policy; substantive information regarding policy formulation and content. Offered Fall, Winter.

**Prerequisites:** FPH 7011 with a minimum grade of B and FPH 7012 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7320 The Social Basis of Health Cr. 3**

Social, cultural, and psychological aspects of health and health-related behavior. Topics include: health prevention and promotion, relationship between stress and illness, health services utilization, patient-practitioner interactions, and coping with chronic illness. Offered Every Term.

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7340 Generalized Linear Models and Categorical Data Cr. 4**

Statistical analysis of categorical and non-normal data, with an emphasis on the cohesive approach of generalized linear models. Specific types of models to be examined include logistic regression, probit regression, and log-linear models. Offered Intermittently.

**Prerequisites:** FPH 7150 with a minimum grade of B and FPH 7160 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7350 Advanced Statistical Programming Cr. 2**

Statistical programming using R and SAS in public health. SAS topics include error checking, reading datasets, coding and formatting variables, writing reports, tables, and graphs. R topics include data visualization and analysis, numeric optimization and bootstrapping. Offered Winter.

**Prerequisites:** FPH 7015 with a minimum grade of B-

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7390 Biostatistical Methods in Epidemiology Cr. 4**

Application and interpretation of biostatistical methods used in epidemiologic studies. Topics include: approaches to missing data, sensitivity analysis, bootstrap methods, statistical power, sample size estimation, and analysis of ordinal exposures and outcomes. Offered Intermittently.

**Prerequisites:** FPH 7020 with a minimum grade of B and FPH 7260 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7420 Principles of Environmental Health Cr. 3**

Current environmental health issues that affect individuals at work and in their communities. Sources of chemical, physical, and biological agents; their associated health effects. Air pollution, exposure prevention, water and solid waste management, and occupational health and safety. Impact of environmental exposures on human health; case studies. Offered Fall, Winter.

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7430 Application of Public Health Principles Cr. 3**

Provides exposure and skill development in a broad and diverse range of public health projects and associated methods while working to develop an applied learning project proposal including grant development and budgeting. Offered Winter.

**Prerequisites:** FPH 7011 with a minimum grade of B, FPH 7012 with a minimum grade of B, and FPH 7210 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7440 Applied Learning Experience Cr. 3**

Individual field experience in public health setting. Integration and synthesis of content and experiences of the public health courses; direct hands-on experience, with appropriate reporting mechanism. Offered Every Term.

**Prerequisites:** FPH 7210 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7460 Linear Mixed Models Cr. 3**

Statistical modeling to incorporate random effects. Topics will include clustered-data analysis, longitudinal data analysis, hierarchical linear models, correlated data, and covariance structure. Offered Intermittently.

**Prerequisites:** FPH 7150 with a minimum grade of B or FPH 7160 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7480 Design of Experiments and Clinical Trials Cr. 3**

Introduction to five different types of experimental designs and design and analytic issues that arise in each of the study designs. Extension of the designs to clinical trials and microarray experiments are discussed. Offered Intermittently.

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7500 Survival Analysis Cr. 3**

Statistical methods for analyzing survival data, including parametric and nonparametric approaches. Topics include Kaplan-Meier estimation, log rank test, and proportional hazards regression analysis. Offered Intermittently.

**Prerequisites:** FPH 7150 with a minimum grade of B or FPH 7160 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7510 Leadership and Population Health Cr. 2**

An overview of the critical principles of public health leadership. The course will emphasize management and leadership skills applied to teams, public health projects and programs. Organizational and leadership principles which are applied to health care settings will also be reviewed. The focus will be on the theoretical and practical application of leading process and performance improvement in a variety of health and public health organizations in the Metropolitan Detroit area. Offered Spring/Summer.

**Prerequisites:** FPH 7011 with a minimum grade of B and FPH 7012 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7511 Health Promotion Messaging and Advocacy Cr. 3**

Health Promotion Messaging and Advocacy is a required course in the Master of Public Health Program's Community Based Public Health Practice (CBPHP) concentration. This course covers the principles and practices of health promotion messaging and the role of health advocacy in tackling health inequalities. Through the lens of the social determinants of health, students will design a community focused health promotion messaging intervention to enhance awareness for community-health outcome improvements. Topics include: behavior change theories for health messaging, message framing, health literacy, health promotion campaigns, crisis and outbreak messaging, technology-based messaging, clinical-patient messaging, and health advocacy. Offered Spring/Summer.

**Prerequisites:** FPH 7011 with a minimum grade of B and FPH 7012 with a minimum grade of B

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7520 Public Health Preparedness Cr. 2**

The course provides an introduction and overview of the discipline of public health emergency preparedness, response, and recovery. It aims to provide a wide-ranging introduction to the field's core competencies. Public health preparedness examines the role and function of public health professionals in emergencies. The course will employ an all-hazards, domestic perspective, and explore different types of natural, biological, chemical, radiological, nuclear, and other human-caused disasters and a whole community approach. Students will learn to apply these concepts to real-world disasters, and identify, evaluate, and apply information related to public health disaster response. The course is designed to a capacity for public health to be active participants in responses to emergencies. Offered Yearly.

**Restriction(s):** Enrollment is limited to Graduate level students.

**Repeatable for 4 Credits**

**FPH 7760 Community Health Education Cr. 3**

Analysis of community health problems and change strategies for health promotion; application of principles and techniques of community health education to multiple ethnic groups and diverse health problems. Offered Winter.

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7780 Emergent Topics in Public Health Cr. 3**

Selected public health topics or emerging fields in public health practice, including environmental health, social behavioral health, epidemiology, biostatistics, and healthcare leadership and management. Offered Intermittently.

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7860 Principles of Occupational Health Cr. 3**

Current occupational health issues; interplay between work environment and worker health. Through case studies, students employ integrative approaches to ensure worker safety and to optimize worker health, well-being and performance. Offered Winter.

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 7990 Directed Studies in Community Health Services Cr. 1-6**

Studies dealing with the public health practice and research to supplement regular course offerings. An approved directed study proposal is required prior to registration. Offered Every Term.

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 8991 Integrated Learning Experience Cr. 3**

This is a seminar in which faculty and students interact in a variety of in-class writing activities to support development of individually prepared scholarly products. This course fulfills the Master's Project requirements for completion of the MPH degree. Offered Every Term.

**Prerequisites:** FPH 7440 with a minimum grade of S

**Restriction(s):** Enrollment is limited to Graduate level students.

**FPH 8999 Master's Thesis Research and Direction Cr. 2-8**

Offered Every Term.

**Restriction(s):** Enrollment is limited to Graduate level students.

**Repeatable for 8 Credits**