

# COURSES FOR COMMUNITY MEDICINE AND POPULATION HEALTH

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## **POPH520 Essentials of Population Health**

Hours 3

An introductory graduate level course designed to teach learners to examine health issues from a population health perspective.

## **POPH521 Health Policy & Planning**

Hours 3

Designed to assist the student in understanding the planning process and factors that influence and determine policy decisions.

## **POPH522 Biostatistics**

Hours 3

A course in statistical methods and concepts particularly appropriate for biomedical research and health-related subjects. Topics include descriptive statistics, probability, parametric and nonparametric procedures for one-group and two-group problems, contingency tables, and computer applications.

## **POPH523 Basic Epidemiology**

Hours 3

A course for students in health-related fields. The basic epidemiologic approach is developed; principles and methods are learned through readings (text and published studies), lectures, discussions, and the preparation of a research design by each student.

## **POPH524 Health Economics**

Hours 3

A course designed for graduate students interested in understanding the importance of health economics on public policy. Topics include the supply and demand of health care, health insurance, consequences of information asymmetry, health technology assessment, comparison of national health care systems, and behavioral economics.

Prerequisite(s): POPH 522 OR HHE 526 OR BER 540 OR ST 509

## **POPH525 Outcomes Research in Population Health**

Hours 3

This course examines the methods utilized in the design, implementation, and evaluation of research studies implemented in a healthcare setting. In this course, you will explore various research designs that can be used to evaluate studies with outcomes at the individual and organizational level. Both naturalistic (or observational) and experimental designed will be covered throughout the course. Various analytic approaches that are appropriate to examine the design, implementation, and evaluation of studies in the medical setting will be applied. Furthermore, students will be expected to develop a research protocol that demonstrates the mastery of core competencies obtained throughout the semester.

Prerequisite(s): POPH 522 or HHE 526 or BER 540 or ST 509

## **POPH530 Introduction to Medical Care**

Hours 3

Overview of Medicine by organ systems: Cardiovascular, Endocrine, Gastrointestinal, Pulmonary, Central Nervous System, Musculoskeletal, Nephrology, and Reproductive Systems. Selected topics in Dermatology, Hematology/Oncology, Addiction and Alcoholism and Infectious Diseases.

## **POPH531 Interprofessional Health Communication**

Hours 3

This interprofessional course focuses on understanding roles, how to work in a team using a common language; presenting information that other team members can understand, contributing to safe and effective systems. Identify basic concepts of effective teamwork among professions with an emphasis on communication and teamwork.

## **POPH532 Healthcare Finance and Reimbursement**

Hours 3

This course covers health insurance operations, principles, payment methods and contracts, and revenue cycle management. Key topics include private and public sector insurance, insurance contracts, underwriting principles, and inpatient and outpatient payment processes. This course presents an overview of financial systems in health care so that students will be able to understand the broad financial context within which organizational decision-making occurs. Additionally, selected financial management topics will be covered with an emphasis on providing future managers with the tools required to carry out their fiscal responsibilities.

## **POPH533 Healthcare Quality & Informatics**

Hours 3

This course explores quality assessment and improvement in healthcare settings and provides an introduction to health informatics and the optimal use of data to improve health outcomes and healthcare practice. Students will learn to identify, plan, measure, evaluate, and sustain process changes that improve the quality of healthcare delivery.

## **POPH535 Data Management**

Hours 3

This course educate students on the basic tenets of relational databases, the components a database, and introductory-level querying through programming. These concepts will be taught through the lens of population health, and will show how many departments of health, health agencies, and large scale research studies store and retrieve data. The goal of this course is to introduce database management concepts to future analysts, thereby empowering their ability to effectively work with database administrators in their pursuits to generate tables for big data analytics. This course will use Microsoft SQL Server © to achieve its purpose and goals.

## **POPH536 Introduction to Qualitative Methods in Population Health**

Hours 3

This course will provide an introduction to qualitative research methodologies as they are applied to the field of population health.

**POPH537 Cultural Competency**

Hours 3

The increasing cultural diversity in the United States has profound implications for population health science and practice. This seminar is designed to address a broad range of theoretical, research, and clinical issues related to cultural competency in healthcare. Using readings, class discussions and student presentations, the seminar will emphasize the role of ethnicity, class, culture, gender, sexual orientation, and disability in population health, and the impact of these factors on assessment, diagnosis and treatment. Students will take an assessment at the beginning and the end of class designed to determine the growth in student knowledge, understanding, acceptance, and behavior change in regard to cultural competence.

**POPH538 Secondary Data Analyses in Healthcare**

Hours 3

This course provides students with the knowledge and skills necessary to effectively analyze secondary data sources in healthcare. Students will be introduced to national healthcare databases and basic data analysis techniques. Through a combination of lectures, hands-on exercises, and projects, students will learn how to manage, analyze, and interpret data to address important population health questions. The course will emphasize practical applications using statistical software such as SPSS and provide critical appraisal skills for evaluating research findings.

Prerequisite(s): POPH 522 (Biostatistics) or equivalent

**POPH595 Population Health Applications (Non-Thesis)**

Hours 3

The practicum is a planned, supervised, and evaluated work experience that compliments the student's classroom education, and allows them the opportunity to apply the lessons learned in their course work. The practicum experience is designed to enhance student's professional experience in the field of population health, and is key to a comprehensive understanding of population health in clinical settings. Success is defined by the exposure to valuable work experience, improvements in subject matter knowledge, mastery of specific competencies, and the development of relationships between the student, preceptor, and the site. The student is responsible for connecting with their peers, academic and professional networks to identifying and contact a suitable preceptor. The student is responsible for completing 120 hours under the guidance of their preceptor, and is required to document their completed hours on a regular basis. Only hours directly relating to the practicum learning objectives should be logged.

Prerequisite(s): POPH 520, POPH 521, POPH 522, POPH 523, POPH 524, AND POPH 525

**POPH599 Thesis Research**

Hours 1-6

A candidate for the Master of Science in Population Health Sciences pursuing the thesis option is required to complete six credit hours dedicated to original research under the direction of a faculty advisory committee. A written thesis is required to be presented, defended orally, and submitted to the faculty advisory committee for approval. Material covered will be of an advanced nature aimed at providing master's students with an understanding of the latest research and current developments within the field. Discussion and advisor guidance will be directed towards readings of research articles and development of research methodology, with the aim of producing an original research contribution that represents a novel development in the field, or a novel perspective on a pre-existing topic in the field.

**POPH622 Multivar Meth Hlt Stats**

Hours 3

This course aims to help the student apply linear methods such as regression and generalized linear models to health-related scientific studies for cross-sectional or longitudinal data. Some software solutions will be discussed and explored.

Prerequisite(s): POPH 522 or HHE 526

**POPH623 Advanced Epidemiology**

Hours 3

This course will take a hands-on approach to learning about epidemiologic methods, particularly as they relate to current health topics, like cardiovascular disease, cancer, and behavioral epidemiology. This is a second-level course on the conduct of epidemiologic research. It will focus on both the conceptual problems of applying the scientific/epidemiologic method and on the practical issues in carrying out of work.

Prerequisite(s): POPH 523 or instructor approval