

# Public Health (M.P.H.)

*\*Only available to students of Southeast University, Sichuan University, and Xiamen University*

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## About The Program:

- **Applied Biostatistics:** The Master of Public Health in Applied Biostatistics is a unique and newly developed degree in response to the growing need for master's-trained professionals with expertise in advanced biostatistical methods. The program is designed to train professionals in the field of public health who have a clear understanding of and expertise in the use, statistical application, and interpretation of large and complex data sets; of the critical importance of valid study designs and analytic methods; and of the application of hypothesis-based development and statistical programming and testing. Students complete their studies with an understanding of the fundamental critical thinking skills and statistical/programming competencies necessary for public health practice and Applied Biostatistics in accordance with Council on Education for Public Health (CEPH) standards. Applied Biostatistics courses address topics such as database coding and development; environmental surveillance; multivariate biostatistics, including the use of regression models and multifactorial analysis; research design; and risk assessment and statistical analysis in human disease. Students in the Applied Biostatistics program are trained in the M.P.H. core competencies while gaining skills to use and apply multiple statistical program packages, including SPSS, SAS, STATA, and R; develop appropriate study designs based on appropriate research questions; and interpret and present study results to various audiences. Thus, the M.P.H. in Applied Biostatistics at Temple University is particularly poised to foster interdisciplinary research and train students to work in an interdisciplinary environment.
- **Epidemiology:** The Master of Public Health in Epidemiology is a professional degree program for those students who desire to receive fundamental and applied training in the public health sciences with a focus on epidemiological study design, disease surveillance methods, bioethics of population-based research, and core biostatistical methods. This practice-oriented program prepares students to successfully work in public health and applied epidemiology agencies, including conducting disease surveillance within government public health agencies; directing community demonstration and clinical trials research; and evaluating and running screening programs and other preventative health services in the broad areas of public health practice and health policy. The program is grounded in the core M.P.H. competencies and disciplines of public health with an emphasis in epidemiologic techniques. It covers the application of epidemiological research methods with an emphasis on developing research and methodological skills and critically evaluating current epidemiological studies.
- **Health Policy and Management:** The Master of Public Health in Health Policy and Management (MPH-HPM) is a terminal, professional degree designed to develop professionals in the field of public health and health services delivery who have a clear understanding of the health policy and management of health-related programs, as well as the Triple Aim of managing health of population, improving the patient experience, and reducing systems cost. The MPH-HPM offers optional concentrations in Health Leadership and in Health Policy.
- **Social and Behavioral Sciences:** The Department of Social and Behavioral Sciences offers the Master of Public Health in Social and Behavioral Sciences (MPH-SBS). The M.P.H. in Social and Behavioral Sciences is a terminal, professional degree that prepares students to design, implement, and evaluate interventions directed toward identified public health problems in communities. This

program aims to prepare public health practitioners to identify and assess the needs of populations; plan, implement, and evaluate programs to address those needs; and ensure that the needs of diverse populations are met to improve their overall health status. The program has a strong focus on addressing the behavioral, social, and cultural factors related to individual and population health and health disparities over the life course, as well as the social and behavioral aspects of community health, health communication, program implementation and evaluation, and health education. Research and practice in this area contribute to the development, administration, and evaluation of programs in public health, which promote and sustain healthy lives for individuals and communities.

### **Career Options:**

- **Applied Biostatistics:** Graduates with an M.P.H. in Applied Biostatistics are employed in research institutions, such as universities and medical centers; at government agencies at the federal level, such as the Centers for Disease Control and Prevention, as well as local and state governments; and in private industry, including pharmaceutical firms, in positions such as research associates and statisticians.
- **Epidemiology:** Graduates with an M.P.H. in Epidemiology have positions in a wide range of health-related settings, including state and local public health departments, community-based organizations, voluntary health agencies, health maintenance organizations, pharmaceutical companies, hospitals, clinics, schools, and public health-related work sites. Graduates are employed as HIV/AIDS coordinators, infection control coordinators, project directors, program evaluation specialists, research directors, prevention specialists, environmental health specialists, protocol directors, senior health educators, and consultants. Virtually all students are placed within three to six months of graduation.
- **Health Policy and Management:** Graduates with an MPH-HPM hold positions in a wide range of health-related settings, including state and local public health departments, federally qualified health centers, hospitals and health systems, community-based organizations, voluntary health agencies, health insurers, clinics, schools, and work sites. Graduates are prepared to assume leadership positions in a variety of health services and public health organizations. Alumni are employed as environmental health specialists, evaluation specialists, healthcare administrators, HIV/AIDS coordinators, infection control coordinators, marketing specialists, prevention specialists, project directors, research directors, senior health educators, and consultants. Virtually all full-time students are placed within three to six months of graduation.
- **Social and Behavioral Sciences:** Graduates with an M.P.H. in Social and Behavioral Sciences have gained employment in a wide range of health-related settings, including state and local public health departments, community-based organizations, voluntary health agencies, health maintenance organizations, hospitals, clinics, schools, and work sites. Graduates are employed as health educators and counselors, evaluation specialists, marketing specialists, prevention specialists, project directors, research and community health program managers, HIV/AIDS coordinators, infection control coordinators, adjunct faculty, and consultants. Virtually all students are placed within three to six months of graduation.

**Affiliation(s):** Locally, the program has long-standing research affiliations with The Food Trust, Fox Chase Cancer Center, Health Federation of Philadelphia, Philadelphia Department of Public Health, Public Health Management Corporation (PHMC), School District of Philadelphia, Temple University Health System, and numerous other community health agencies.

**Study Abroad:** Short-term intensive study abroad courses are offered as part of the M.P.H. program of study. These courses are offered during the Summer and are open to both undergraduate and graduate students.

**Prerequisites for Admission:** Applicants' files are reviewed for undergraduate coursework in mathematics and/or statistics, social science, and writing.

**Areas of Specialization:** The M.P.H. degree program is offered in five specialty fields of study:

- Applied Biostatistics (APBIO)
- Epidemiology (EPI)
- Health Policy and Management (HPM)
- Social and Behavioral Sciences (SBS)

In addition, a certificate in Global Health is available to all students in the M.P.H. program. Students are able to complete this transcribed concentration by utilizing their three elective courses for Global Health classes.

## Requirements of Programs:

- **Total Credit Hours:** 45
- **Culminating Events:**

### *Fieldwork Practicum:*

The M.S. thesis is an original, theoretical, and/or empirical study that contributes to the field of Medicinal/Pharmaceutical Chemistry. It should expand existing knowledge and demonstrate the student's knowledge of research methods and a mastery of her/his primary area of interest. The thesis should be rigorously investigated; uphold the ethics and standards of the pharmaceutical sciences; demonstrate an understanding of the relationship between the primary area of interest and the broader field of medicinal chemistry; and be prepared for publication in a professional journal.

Students who are preparing to defend their thesis should confirm a time and date with their advisor and register with the Administrative Assistant at least 15 days before the defense is to be scheduled. The Administrative Assistant arranges the time, date, and room within two working days and forwards to the student the appropriate forms. Once approved, the public announcement of the defense is posted.

The Thesis Examining Committee evaluates the student's ability to express verbally her/his research question, methodological approach, primary findings, and implications. This committee is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be members of the Graduate Faculty of the School of Pharmacy. The Thesis Examining Committee votes to pass or fail the thesis and the defense at the conclusion of the public presentation.

## College Core Courses

**Current and Emerging Issues in Public Health and Health Professions** - This course is designed to provide students with an introduction to the five core areas of public health -- biostatistics, epidemiology, environmental health, health services administration, and social behavioral sciences --

and to demonstrate the intersection of public health with various health, health care, and human service professions. The discipline of public health is multifaceted, and these facets impact individuals and communities in different ways. Students will be expected to think critically about issues such as disease prevention, health promotion, the determinants of health, health information privacy, access to health services, and environmental issues, and to consider how those issues drive human behavior and community (local, national, and international) development. Successful graduation from the College of Public Health is contingent upon completion of 12 web-based modules from the approved compendium for this course. There are six core modules that all students must complete: Advancing Health People 2020, Social Determinants of Health, Access to Health Services, Health Information Technology, Public Health Infrastructure in the United States, and Environmental Health. The remaining six modules may be either embedded by program faculty or self-selected and self-paced by the individual student. Faculty can mandate certain modules within course content.

## **Public Health Core Courses**

**Environmental Health** - This course explores the effects of interactions between the environment and human health, and the ways that adverse effects may be mitigated. Environmental health hazards, including chemical, biological, and physical pollutants in air, water, soil, and food are addressed, as are risk analysis and risk communication as applied to environmental health. The course examines how problems and solutions are identified globally, nationally, and locally. The use of biological and chemical agents as weapons is also explored. This course is available online.

**Biostatistics** - This course introduces applied biostatistics as used in research in public health. Topics of study include statistical methods used for descriptive and analytic research, inferential statistics, surveillance systems, and statistical software used in public health.

**Epidemiological Research Methods I** - This course provides an introduction to the fundamentals of conducting epidemiologic research and protocol development. It covers definitions of epidemiology; measures of disease frequency and risk assessment; measures of effect and association; epidemiologic study designs, including randomized clinical trials, cohort, case-control studies, and cross-sectional surveys; assessment of screening programs; an overview of the role of bias and confounding in epidemiologic study results; and analytic techniques, including modeling using multiple variables, survival analysis, and issues related to quality assurance. Note: This course is the introductory epidemiology course for students in the M.S. in Epidemiology or related Public Health degree programs that require advanced quantitative methods. May be taken in place of EPBI/PBHL 5101 for students in the M.P.H., M.S. in Environmental Health and Ph.D. programs.

**Political and Economic Aspects of Health** - The course provides an introduction to the structure and delivery of healthcare in the United States, as well as an introduction to health policymaking. In addition to required reading materials, students will be asked to examine current health policies at the local, state, and/or national level.

**Fundamentals of Public Health** - This course encompasses historical and sociocultural approaches to understanding public health and bioethics. Emphasis is on understanding public health systems from the dawn of history to the 21st century and the evolution of bioethical issues including the application of bioethical principles, regulations, and strategies in research and health practice. This seminar

emphasizes the integration of conceptual and experiential learning. This is reflected in the course design and in teaching and learning processes.

**Theoretical Foundations of Health Behavior** - Theories of decision-making related to health behavior. Emphasis on the dynamic interaction of attitudes, values, situational factors and other factors that influence health promoting and health damaging behavior.

## **Elective (9 credits)**

### **M.P.H. Fieldwork Experience**

**MPH Fieldwork I** - This course entails a fieldwork project or internship in a public health agency. It includes seminars, oral and written reports of progress, and joint supervision by a preceptor and faculty member.

**MPH Fieldwork II** - This course is an evaluation of the fieldwork project or internship using a full range of research methodologies. Data are collected, analyzed, and reported in a comprehensive final report. Oral and/or poster presentations are presented to public health organizations. The course includes a final oral defense of the project or internship.

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## **Courses:**

Click [HERE](#) for more information on the courses below.

- Biostatistics
- Spatial Analysis in Public Health
- Fundamentals of Epidemiology
- Epidemiological Research Methods I
- Mental Health Epidemiology
- Seminar in Current Issues in Public Health
- Research Methods in Public Health
- Social Epidemiology
- Multivariable Biostatistics
- Structural Equation Modeling
- Epidemiological Research Methods II
- Public Health Data Reporting
- Multilevel Mod in Int Res
- Chronic Disease Epidemiology
- Infectious Disease Epidemiology
- Data Management and Analysis
- Epidemiology of HIV/AIDS
- Epidemiology Grand Rounds
- Grantsmanship in Health Research
- Clinical Research Methods in Public Health
- Behavioral Measurement
- Systematic Reviews
- Readings and Conference in Public Health
- Biostat CnsIt Practicum
- MPH Capstone Seminar
- MPH Fieldwork I
- MPH Fieldwork II
- Independent Project in Environmental Health
- Preliminary Examinations
- Masters Res in Pub Health