PUBLIC HEALTH, MPH

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Degree: Master of Public Health (MPH)

Program Overview
A Master of Public Health degree is designed to prepare students to address the broad mission of public health, defined as "enhancing health in human populations, through organized community effort," utilizing education, research and community service. Public health practitioners are prepared to identify and assess the health needs of different populations, and then to plan, implement and evaluate programs to meet those needs. It is the task of the public health practitioner to protect and promote the wellness of humankind. The master of public health program prepares students to enhance health in human populations through organized community effort. Graduates are qualified to work in local and state health departments, universities and colleges, hospitals, ambulatory medical centers, non-profit organizations, and the insurance and pharmaceutical industries. The program seeks to attract a rich mix of students, including those pursuing degrees in medicine, nursing, dentistry, law, social work, anthropology, bioethics, management and other fields, as well as students holding undergraduate degrees.

Students in the MPH program can complete the program using one of two plans of study. Common Core and Intensive Research Pathway. The Common Core is the standard plan of study for MPH Students and the Intensive Research Pathway (IRP) is an alternative plan of study that allows students to gain exposure to more quantitative coursework. Students can complete any concentration regardless of their plan of study. Previous experience or education pertaining to public health may increase the student's flexibility in course selection. Students may also enroll part-time and take courses over a three to five-year period.

Both the Common Core and the IRP address and meet all Foundational Knowledge and Core Competencies. Regardless of plan of study, all MPH students will complete the same Applied Practical Experience and Integrated Learning Experience requirements. Below is a direct plan of study comparison between the Common Core and the IRP.

Dual Degree Information
Because of the breadth of the field of public health, the MPH Program is an ideal degree to integrate with other professional schools and graduate programs at Case. University leadership has recognized collaboration as one of the priorities for the future of the university and has approved 11 MPH dual degree programs.

Generally, dual degree students complete both degrees by adding one year of study to the partner degree. For example, an MD student could add one year to the four-year MD Program to complete his/her MD/MPH dual degree in five years. In addition to the requirements for the partner degree program, all dual degree students will complete 27 credits of core MPH requirements (18 core credits plus 9 Culminating Experience credits). Of the remaining 15 credits, it is anticipated that 9 will be selected from courses taught by the Department of Population and Quantitative Health Sciences. The remaining 6 credits can be selected from the list of approved courses in the partner program. Students wishing to take courses not previously approved in the dual degree plan may petition to do so in writing to both partner programs. In most cases, it will be assumed that dual degree students will adopt an area of concentration specific to their shared degree area.

Dual degree students should have academic advisors from both the MPH Program and the partner program faculty. Advisors of dual degree students are encouraged to develop dialogues with their partner advisors and collaborate on students’ programs of study. This dialogue should be accomplished by a minimum of one annual group meeting of both advisors with the student to be arranged by the student. During the initial meeting, before the end of the student's first semester, a Planned Program of Study (PPOS) is developed. The PPOS can be revised later, also with the approval of both advisors. Academic performance issues, or any other issues, are presented by the advisors to the MPH Dual Degree Partners Committee for final disposition. The MPH Dual Degree Partners Committee will adjudicate any difference in opinion between advisors.

The Director of the MPH Program, assisted by the Administrative Director, is the coordinator of the dual degree programs and provides services for student support, including special events and publications dedicated to serving the needs of dual degree students and building their sense of scholarship and community as a group.

Important Note: The program information contained on this page is current as of July 1st, 2022. For the most current information, we advise you to review the Masters in Public Health program handbook. You can find the most recent Program Handbook here.

Graduate Policies
For graduate policies and procedures, please review the School of Graduate Studies section of the General Bulletin.

Program Requirements

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MPH 405</td>
<td>Statistical Methods in Public Health</td>
<td>3</td>
</tr>
<tr>
<td>MPH 406</td>
<td>History and Philosophy of Public Health</td>
<td>3</td>
</tr>
<tr>
<td>MPH 411</td>
<td>Introduction to Health Behavior</td>
<td>3</td>
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<tr>
<td>MPH 429</td>
<td>Introduction to Environmental Health</td>
<td>3</td>
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<tr>
<td>MPH 439</td>
<td>Public Health Management and Policy</td>
<td>3</td>
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<tr>
<td>MPH 483</td>
<td>Introduction to Epidemiology for Public Health Practice</td>
<td>3</td>
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Culminating Experience:
- MPH 652 Public Health Capstone Experience 6
- MPH 650 Public Health Practicum 3

Complete 9 credits within chosen Concentration 9

Electives 6

Total Hours 42

Intensive Research Pathway Course Requirements:

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<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>MPH 406</td>
<td>History and Philosophy of Public Health</td>
<td>3</td>
</tr>
<tr>
<td>MPH 411</td>
<td>Introduction to Health Behavior</td>
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Population Health Research Concentration
Coordinator - Mendel Singer, PhD, MPH

Concentration Competencies:

- Construct a conceptual model and choose an appropriate existing data set, such as electronic health records, Medicare/Medicaid, Medical Expenditure Panel Survey, Health Care Utilization Project and Health and Retirement Study, to address a specific population health research question.
- Design and perform a study consisting of a retrospective analysis of an existing data set to address a population health research question of interest.
- Design efficient computer programs for data management and manipulation, statistical analysis, as well as presentation using R (or another statistical programming language, such as SAS).
- Apply advanced statistical methods for analyzing count data, categorical data, and time to event data: specifically, Poisson regression models, multinomial and ordinal logistic regression models, and Cox proportional hazard models.
- Perform predictive modeling employing different strategies for model selection (best subsets and shrinkage approaches), imputation of missing values, and splitting data into training and test data sets.

MPHP 429 Introduction to Environmental Health 3
MPHP 439 Public Health Management and Policy 3
MPHP 483 Introduction to Epidemiology for Public Health Practice 3
PQHS 431 Statistical Methods I 3
PQHS 432 Statistical Methods II 3
PQHS 490 Epidemiology: Introduction to Theory and Methods 3
PQHS 414 Data Management and Statistical Programming 3

Culminating Experience
MPHP 652 Public Health Capstone Experience 6
MPHP 650 Public Health Practicum 3

Complete 6 credits within chosen Concentration  6

Total Hours 42

Concentration Requirements
Currently, five different concentrations are offered by the CWRU MPH Program: Population Health Research, Global Health, Health Policy & Management, Health Promotion & Disease Prevention, and Health Informatics. Each concentration has two required courses (in addition to the core required courses), plus elective offerings to be combined for a total of 9 credit hours in concentration coursework. Students develop a Capstone project relevant to the concentration area to expand and apply the knowledge of the subject. Individual emphasis will vary from student to student within each concentration.

MPH students can also choose to expand the emphasis and depth of their program of study by electing to do a double concentration plan of study. For the double concentration, the student chooses two areas (two concentrations) of equal emphasis. The student's Capstone project must embrace and integrate both emphases. Students choosing to do the double concentration plan of study should also work closely with an advisor to ensure optimal course selection and foster the evolution of a successful Capstone project.

Population Health Research Concentration
Coordinator - Peter Zimmerman, PhD

Concentration Competencies:

- Describe the relationships among agencies focused on colonial health, tropical medicine, international health and global health in a historical context.
- Prioritize diseases of global health importance and their epidemiological context.
- Apply methods for strengthening and focusing existing capacities and resources for health program sustainability and enhancement.
- Contrast application of technology to impact priority diseases with addressing the underlying social and economic determinants of global health linked to health care delivery systems.
- Apply the fundamental international principles and standards for the protection of human research subjects in diverse cultural settings.

Global Health Concentration
Coordinator - Kate Nagel, DrPH

Concentration Competencies:

- Apply the principles of program development, planning, budgeting, and resource management in organizational or community initiatives.

Required Concentration Courses (6 Credits)

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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>MPHP 432</td>
<td>Statistical Methods II</td>
<td>3</td>
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<tr>
<td>PQHS 515</td>
<td>Secondary Analysis of Large Health Care Databases</td>
<td>3</td>
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Concentration Electives (3 Credits)

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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>MPHP 482</td>
<td>Qualitative and Mixed Methods in Public Health</td>
<td>3</td>
</tr>
<tr>
<td>HSNC 421</td>
<td>Health Economics and Strategy</td>
<td>3</td>
</tr>
<tr>
<td>MPHP 421</td>
<td>Health Economics and Strategy</td>
<td>3</td>
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<tr>
<td>MPHP 450</td>
<td>Clinical Trials and Intervention Studies</td>
<td>3</td>
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<tr>
<td>MPHP 467</td>
<td>Comparative and Cost Effectiveness Research</td>
<td>1</td>
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<tr>
<td>MPHP 484</td>
<td>Global Health Epidemiology</td>
<td>3</td>
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Global Health Electives (3 Credits)

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<tbody>
<tr>
<td>PQHS 414</td>
<td>Data Management and Statistical Programming</td>
<td>3</td>
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<tr>
<td>PQHS 435</td>
<td>Survival Data Analysis</td>
<td>3</td>
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<tr>
<td>PQHS 440</td>
<td>Introduction to Population Health</td>
<td>3</td>
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<tr>
<td>PQHS 451</td>
<td>A Data-Driven Introduction to Genomics and Human Health</td>
<td>3</td>
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<tr>
<td>PQHS 452</td>
<td>Statistical Methods for Genetic Epidemiology</td>
<td>3</td>
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<tr>
<td>PQHS 459</td>
<td>Longitudinal Data Analysis</td>
<td>3</td>
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Health Care Policy & Management Concentration
Coordinator - Kate Nagel, DrPH

Concentration Competencies:

- Apply the principles of program development, planning, budgeting, and resource management in organizational or community initiatives.
• Describe how policy impacts healthcare delivery and outcomes
• Apply a continuous quality and performance improvement framework to address organizational coordination and performance
• Identify methods for decision making using evidence-based, systems thinking, and data-driven approaches to health policy and management
• Identify how access, quality, and cost are influenced by organizational or financial structures

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<tbody>
<tr>
<td>MPHP 468</td>
<td>The Continual Improvement of Healthcare: An Interdisciplinary Course</td>
<td>3</td>
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<tr>
<td>MPHP 421</td>
<td>Health Economics and Strategy</td>
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<tr>
<td>OR</td>
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<tr>
<td>MPHP 456</td>
<td>Health Policy and Management Decisions</td>
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**Concentration Elective (3 Credits)**

- BETH 417 - Introduction to Public Health Ethics: 3 hours
- HSMC 420 - Health Finance: 3 hours
- LAWS 5205 - Public Health Law: 2 hours
- MPHP 433 - Community Interventions and Program Evaluation: 3 hours
- MPHP 467 - Comparative and Cost Effectiveness Research: 1 hour
- MPHP 475: 3 hours
- MPHP 510: 3 hours
- MPHP 532 - Health Care Information Systems: 3 hours
- POSC 483 - Health Policy and Politics in the United States: 3 hours

**Health Informatics Concentration**
Coordinator - Siran Koroukian, PhD

**Concentration Competencies:**

- Understand the fundamentals of using biomedical ontologies for integration of biomedical and health data
- Differentiate between standard health data exchange formats and vocabularies
- Explain how clinical data originating from different systems are collected and coded and how they are normalized, aggregated, and analyzed
- Describe how biomedical terminological systems are used in natural language processing workflow for unstructured biomedical text
- Describe the ethical, regulatory, managerial, financial, and practical aspects of data security

**Required Concentration Courses (6 Credits)**

- PQHS 416 - Computing in Biomedical Health Informatics: 3 hours
- IIME 473 - Fundamentals of Clinical Information Systems: 3 hours

**Concentration Elective (3 Credits)**

- HSMC 432 - Health Care Information Systems: 3 hours
- HSMC 446 - Models of Health Care Systems: 1.5 hours
- HSMC 457 - Health Decision Making & Analytics: 3 hours
- MPHP 432 - Statistical Methods II: 3 hours
- NUND 510 - Application of Health Information Technology and Systems: 1 hour

**Health Promotion & Disease Prevention Concentration**
Coordinator - Erika Trapl, PhD

**Concentration Competencies:**

- Assess needs for health interventions for the general public as well as at-risk populations
- Systematically evaluate health promotion strategies across typologies of evidence
- Apply system complexity concepts in the context of nested individuals, social networks, organizations, and communities (i.e., systems nested within systems) in the analysis of public health problems and solutions
- Develop health education/health promotion strategies that create an understanding of and respect for the importance of culture in practice and policy
- Apply social and behavioral theory and planning models and evidence-based health promotion strategies for a variety of populations in the development of a health education/health promotion plan

**Required Concentration Courses (6 Credits)**

- MPHP 433 - Community Interventions and Program Evaluation: 3 hours
- MPHP 413 - Health Education, Communication, and Advocacy: 3 hours

**Select 1 Concentration Course from the list below (3 Credits)**

- MPHP 464 - Obesity and Cancer: Views from Molecules to Health Policy: 3 hours
- MPHP 475: 3 hours
- MPHP 485: 3 hours
- MPHP 510 - Health Disparities: 3 hours

**Important Note:** The program information contained on this page is current as of July 1st, 2022. For the most current information, we advise you to review the Masters in Public Health program handbook. You can find the most recent Program Handbook here.

**Dual Degree Options**

- Anthropology, MA/Public Health, MPH
- Anthropology, PhD/Public Health, MPH
- Bioethics and Medical Humanities, MA/Public Health, MPH
- Business Administration, MBA/Public Health, MPH
- Dental Medicine, DMD/Public Health, MPH
- Healthcare Management, MHcM/Public Health, MPH
- Law, JD/Public Health, MPH
- Medicine, MD/Public Health, MPH
- Nutrition, MS/Public Health, MPH
- Nursing, MSN/Public Health, MPH
- Public Health, MPH/Social Work, MSW
- Integrated Graduate Studies (IGS) - BA/MPH