

Public Health Data Science MPH

The MPH in Public Health Data Science equips students with the data management, manipulation, analysis and communication skills that will allow them to contribute to designing, understanding, and implementing public health efforts in the future.

MPH students must complete a minimum of 43 credits. To complete program requirements, students will choose electives from the list below, in consultation with their academic advisor.

PUBLIC HEALTH CORE REQUIREMENTS

12 CREDITS

PubH 6020 Fundamentals of Social and Behavioral Science (2 cr)

PubH 6102 Issues in Environmental and Occupational Health (2 cr)

PubH 6250 Foundations of Public Health (2 cr)

PubH 6320 Fundamentals of Epidemiology (3 cr)
or

PubH 6341 Epidemiologic Methods I (3 cr)

PubH 6741 Ethics in Public Health: Professional Practice and Policy (1 cr)

PubH 6751 Principles of Management in Health Services Organizations (2 cr)

PUBLIC HEALTH DATA SCIENCE REQUIREMENTS

19 CREDITS

PubH 6450 Biostatistics I (4 cr)

PubH 6451 Biostatistics II (4 cr)

PubH 7461 Exploring & Visualizing Data in R (2 cr)

PubH 7462 Building Data Analysis Pipelines (2 cr)

PubH 7463 Fundamentals of Prediction and Machine Learning (3 cr)

PubH 7465 Biostatistical Consulting (3 cr)

APPLIED PRACTICE EXPERIENCE

PubH 7496 (1 cr)

INTEGRATIVE LEARNING EXPERIENCE

PubH 7494 (1 cr)

ELECTIVES COURSES

MINIMUM 12 CREDITS TOTAL

METHODS & STUDY DESIGN

Students must select at least 6 credits from the following courses:

PubH 6342 Epidemiologic Methods II (3 cr)

PubH 6809 Advanced Methods in Health Decision Science (3 cr)

PubH 7401 Fundamentals of Biostatistical Inference (4 cr)

PubH 7415 Introduction to Clinical Trials (3 cr) or

PubH 7420 Clinical Trials (3 cr)

PubH 7430 Statistical Methods for Correlated Data (3 cr)

PubH 7445 Statistics in Genetics & Molecular Biology (3 cr)

PubH 7470 Designs in Biomedical Research (3 cr)

PROGRAMMING, DATABASES & VISUALIZATION

Students must select at least 6 credits from the following courses:

CSci 5707 Principles of Database Systems (3 cr)

GEOG 5561 Principles of Geographic Information Science (4 cr)

HINF 5502 Python Programming Essentials for the Health Sciences (4 cr)

HINF 5510 Applied Health Care Databases (3 cr)

MSBA 6330 Big Data Analytics (3 cr)

PubH 6141 GIS and Spatial Analysis for Public Health (3 cr)

PubH 6325 Data Processing Using PC-SAS (1 cr)

PubH 6420 Introduction to SAS Programming (1 cr)

PubH 6739 Data dashboards and Visualization with Tableau (1 cr)

PubH 7253 Introduction to (Geographic Information Systems) GIS (1 cr)

PROGRAM COORDINATOR

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