

Master of Public Health, MPH

Requirements

The Master of Public Health requires at least 42–44 s.h. of graduate credit; the minimum credit hours required are determined by a student's subprogram. Students must maintain a Graduate College major program grade-point average (GPA) of at least 3.00. The degree offers graduate preparation to students affiliated with College of Public Health (CPH) academic departments (biostatistics [p. 1], community and behavioral health [p. 2], epidemiology [p. 3], occupational and environmental health [p. 3], and policy [p. 4]), students affiliated with specific combined degree programs (e.g., MD/MPH, PharmD/MPH), and other students with specific professional backgrounds (e.g., practicing veterinarians [p. 4], practicing professionals [p. 5]).

Degree requirements for all MPH subprograms include a core course in public health practice and in each of the five core disciplines of public health (biostatistics, epidemiology, environmental health, health policy and management, and social and behavioral sciences), a set of subprogram-specific required courses and electives, one interprofessional education course, and a practicum experience.

All MPH students complete the coursework listed under "Common Requirements." In addition, students complete the coursework listed for their chosen subprogram.

Common Requirements

The following coursework is required for all MPH students. Students must earn a B-minus or higher in each core course. A minimum 3.00 GPA in MPH core courses is required. Students may repeat a course to achieve this standard.

Core Courses

Course #	Title	Hours
All of these:		
CPH:5100	Introduction to Public Health	3
BIOS:4120	Introduction to Biostatistics (students in the biostatistics subprogram may substitute BIOS:5710)	3
CBH:4105	Introduction to Health Promotion and Disease Prevention	3
EPID:4400	Epidemiology I: Principles	3
HMP:4000	Introduction to the U.S. Health Care System (students in the policy subprogram may substitute HMP:5005)	3
OEH:4240	Global Environmental Health	3

Interprofessional Education Course

CPH:5203 Interprofessional Education and Practice for MPH Students (0 s.h.) is required for all MPH students. Students in a combined/joint non-departmental professional degree program (i.e., MPH/MD, MPH/PharmD, MPH/DVM), the practicing veterinarians subprogram, or the practicing

professionals subprogram will have this requirement waived since the content is covered in pharmacy, medicine, or veterinary courses, or professional experience prior to enrollment in the MPH program.

MPH Practicum

Students complete CPH:7800 MPH Practicum for 3 s.h. During the practicum, students must complete at least 200 work hours in a public health practice setting, applying knowledge and skills from their MPH courses.

Prior to registering for the course, students develop a project proposal in consultation with their host organization (preceptor) and the course director. A final written report with an oral presentation or a poster presentation is required. There are many practicum opportunities for MPH students locally, nationally, and internationally.

Subprograms

Biostatistics Subprogram

The Master of Public Health with the biostatistics subprogram requires 42 s.h. of graduate credit. The subprogram is offered by the Department of Biostatistics.

The subprogram is designed to train public health professionals who can provide leadership in the analysis of public health data and the design of studies for public health investigations. It is intended for individuals who are interested in public health and who have quantitative ability but not advanced mathematics training.

Applicants to the subprogram must meet all MPH admission requirements; see Admission [p.] in this section of the catalog. They also should have a cumulative grade-point average of at least 3.00 and should have completed the following math and computer science coursework: single variable calculus and matrix algebra, satisfied by one semester of calculus equivalent to AP Calculus AB and a high school algebra course involving matrices; and elementary computer programming instruction in any commonly used modern programming language (e.g., Python, Java, C++). Individuals who are admitted to the subprogram without having met all of these requirements must satisfy unmet requirements during their first semester of enrollment in the program.

In addition to the MPH coursework listed under "Common Requirements," the biostatistics subprogram requires the following courses.

Biostatistics Subprogram Core

Course #	Title	Hours
All of these:		
BIOS:4510	Data Science Foundations in R	2
BIOS:5120	Regression Modeling and ANOVA in the Health Sciences	3
BIOS:5130	Applied Categorical Data Analysis	3

Students with a sufficient mathematical background can substitute BIOS:5710 Biostatistical Methods I, BIOS:5720 Biostatistical Methods II, and BIOS:5730 Biostatistical Methods in Categorical Data in place of BIOS:4120 Introduction to Biostatistics (usually taken as part of the MPH Common Requirements), BIOS:5120 Regression Modeling and ANOVA in the Health Sciences, and BIOS:5130 Applied Categorical Data

Analysis. The advanced sequence reduces the elective credit needed by 2 s.h.

Biostatistics Electives

Students fulfill the remainder of the 42 s.h. with elective courses. Electives may be chosen from the following list or may include any related course approved by the student's advisor.

Course #	Title	Hours
BIOL:4213	Bioinformatics	4
BIOS:6210	Applied Survival Analysis	3
BIOS:6310	Introductory Longitudinal Data Analysis	3
BIOS:6420	Survey Design and Analysis	3
BIOS:6610	Statistical Methods in Clinical Trials	3
BIOS:6650	Causal Inference	3
BIOS:6720	Statistical Machine Learning for Biomedical and Public Health Data	3
BIOS:6810	Bayesian Methods and Design	3
BIOS:7270	Scholarly Integrity in Biostatistics	1
BIOS:7600	Advanced Biostatistics Seminar	0-3
CS:4470	Health Data Analytics	3
CS:4740	Large Data Analysis	3
CS:5110	Introduction to Informatics	3
DATA:6200	Predictive Analytics	3
EPID:6920	Applied Administrative Data Analysis	2
ISE:4172	Big Data Analytics	3
STAT:3100	Introduction to Mathematical Statistics I	4
STAT:3101	Introduction to Mathematical Statistics II	3
STAT:3210	Experimental Design and Analysis	3
STAT:4100	Statistical Inference I	3
STAT:4101	Statistical Inference II	3
STAT:4520	Bayesian Statistics	3
STAT:4540	Statistical Learning	3
STAT:4580	Data Visualization and Data Technologies	3

Community and Behavioral Health Subprogram

The Master of Public Health with the community and behavioral health subprogram requires 42 s.h. of graduate credit. The subprogram is offered by the Department of Community and Behavioral Health.

The subprogram prepares public health practitioners for a variety of positions related to community development, health program implementation, and health education. Students learn how to design, implement, and evaluate evidence-based interventions directed toward identified public health problems in populations.

A bachelor's degree in the social and behavioral sciences is good preparation for this program, but students come from

a variety of educational backgrounds. Preference is given to applicants who have professional experience.

In addition to the MPH coursework listed under "Common Requirements," the community and behavioral health subprogram requires the following courses.

Community and Behavioral Health Subprogram Core

Students earn 18 s.h. in the required subprogram core.

Course #	Title	Hours
All of these:		
CBH:5220	Health Behavior and Health Education	3
CBH:5305	Evaluation: Approaches and Applications	3
CBH:6205	Designing and Implementing Interventions	3
CBH:6230	Health Equity, Disparities, and Social Justice	3
CBH:6335	Research Methods in Community and Behavioral Health	3
One of these:		
CBH:5235	Community-Based Participatory Research (offered each fall)	3
CBH:5310	Qualitative Research for Public Health (offered each spring)	3

Community and Behavioral Health Electives

Students must take an additional 3 s.h. of elective community and behavioral health coursework or, with the approval of their advisor, coursework in another area.

The following is a list of suggested elective courses.

Course #	Title	Hours
CBH:4140	Feminist Activism and Global Health	3
CBH:4350	Maternal and Child Health Seminar	1
CBH:5235	Community-Based Participatory Research (if not taken as subprogram core course)	3
CBH:5310	Qualitative Research for Public Health (if not taken as subprogram core course)	3
CBH:5350	Foundations of Maternal and Child Health	3
CBH:5450	Foundations of Maternal and Child Health II	3
CBH:6115	Ethnographic Field Methods	3
CBH:6415	Independent Study in Community and Behavioral Health	arr.
HMP:6360	Nonprofit Organizational Effectiveness I	3
URP:6253	Designing Sustainable and Healthy Cities	1-3

URP:6260	Transportation Policy and Planning	3
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Epidemiology Subprogram

The Master of Public Health with the epidemiology subprogram requires 44 s.h. of graduate credit. The subprogram is offered by the Department of Epidemiology.

The subprogram focuses on fundamental epidemiological concepts and methods and provides training in the use of public health data and methods for disease assessment and in methods for evaluating the need and outcome of programs and interventions. Graduates of the program work in public health departments and other health care settings.

Epidemiology subprogram students are required to attend departmental seminars and journal club. They must also present one scientific poster at an international, national, regional, state, university, or departmental poster session.

In addition to the MPH coursework listed under "Common Requirements," the epidemiology subprogram requires the following courses.

Epidemiology Subprogram Core

Course #	Title	Hours
All of these:		
BIOS:5120	Regression Modeling and ANOVA in the Health Sciences	3
EPID:5540	Public Health Surveillance Mechanisms, Applications, and Data	3
EPID:5580	Public Health Laboratory Techniques	1
EPID:5600	Introduction to Epidemiology Data Management and Analysis	3
EPID:5610	Intermediate Epidemiology Data Analysis With SAS and R	3
EPID:5925	Epidemiology Journal Club: Evaluating the Literature (taken three times)	0
EPID:6400	Epidemiology II: Advanced Methods	4
One of these bioscience courses:		
HHP:4390	Understanding Human Disease	3
PATH:5270	Pathogenesis of Major Human Diseases	3

Students who already have completed a course equivalent to one of the bioscience courses, HHP:4390 Understanding Human Disease or PATH:5270 Pathogenesis of Major Human Diseases, may substitute additional elective credit.

Epidemiology Electives

Students fulfill the remainder of the 44 s.h. with elective courses. At least 3 s.h. of elective credit must be earned in courses offered by the Department of Epidemiology (prefix EPID) or in one of the following biostatistics courses.

Course #	Title	Hours
BIOS:6210	Applied Survival Analysis	3
BIOS:6310	Introductory Longitudinal Data Analysis	3

Epidemiology Other Requirements

Department of Epidemiology Seminar

Every week during the academic year, the Department of Epidemiology seminar provides a forum for speakers to present information or research pertaining to diverse topics in epidemiology. Contact information for the seminar coordinators is located on the Department of Epidemiology website under Preceptorship, Journal Club, and Seminar Contacts. Information about the schedule is distributed weekly each semester. Students are expected to achieve at least 80% attendance at the seminar during each semester of enrollment.

Journal Club

Students are required to enroll in EPID:5925 Epidemiology Journal Club: Evaluating the Literature three times, typically fall and spring semesters of their first year and fall semester of their second year. Through the class, students gain experience in reading, interpreting, and critically evaluating recently published journal articles. Journal Club for first-year students is for those who are new to the department and is offered in the fall semester. Students should register for section 1 of the course.

Full-time students enroll in this course for 0 s.h. Students enrolled part-time (less than 9 s.h.) who have a graduate research assistantship appointment may choose to register for 1 s.h. However, the credit earned for this course will not be applied toward the minimum semester hours required for the MPH in epidemiology.

Every other week during the academic year, the Journal Club meets to discuss articles of interest in the field. Contact information for the Journal Club coordinators can be found on the Department of Epidemiology website under Preceptorship, Journal Club, and Seminar Contacts. Information about the schedule is distributed to students each semester. Students are required to achieve at least 80% attendance at Journal Club for three semesters during their time in the program.

Scientific Poster Requirement

Every MPH student in the epidemiology subprogram is required to present at least one scientific poster at the department level and is also encouraged to present a scientific poster at the international, national, regional, state, or university level at some point before graduation. The poster can be the same one used to meet the MPH program requirements for the practicum experience.

Occupational and Environmental Health Subprogram

The Master of Public Health with the occupational and environmental health subprogram requires 42 s.h. of graduate credit. The subprogram is offered by the Department of Occupational and Environmental Health.

The subprogram provides students with a broad perspective on public health and career preparation for a variety of professional positions in occupational and environmental health. Public health experience provides a desirable background for this subprogram.

In addition to the MPH coursework listed under "Common Requirements," the occupational and environmental health subprogram requires the following courses.

Occupational and Environmental Health Subprogram Core

Students earn 10 s.h. in the required subprogram core.

Course #	Title	Hours
All of these:		
OEH:5010	Occupational and Environmental Health Seminar (taken three times; twice for 0 s.h. and once for 1 s.h.)	0-1
OEH:5620	Occupational Health	3
OEH:6110	Rural Health and Agricultural Medicine	3
OEH:6230	Applied Environmental Health	3

Occupational and Environmental Health Electives

Students fulfill the remainder of the 42 s.h. with elective courses. Electives may be chosen from the following list of suggested courses or may include other related graduate-level coursework approved by the student's advisor.

Course #	Title	Hours
OEH:4310	Occupational Ergonomics: Principles	3
OEH:4510	Injury and Violence Prevention	3
OEH:4530	Global Road Safety	3
OEH:5410	Occupational Safety	3
OEH:6120	Current Topics in Agriculture and Rural Health	0-1
OEH:6420	Methods in Exposure Science	3
OEH:6431	Assessing Noise Hazards	1
OEH:6432	Assessing Nonionizing Radiation Hazards	1
OEH:6433	Assessing Ionizing Radiation Hazards	1
OEH:6510	Environmental and Occupational Epidemiology	3
OEH:6520	Injury Epidemiology	3
OEH:6710	Human Toxicology and Risk Assessment	3

Policy Subprogram

The Master of Public Health with the policy subprogram requires 42 s.h. of graduate credit. The subprogram is offered by the Department of Health Management and Policy.

The subprogram offers coursework and applied learning experiences that prepare students for careers in health policy analysis, system and organizational planning, and program evaluation. Graduates of the program find positions in federal, state, and local government; professional associations; and private agencies. Varied academic backgrounds are appropriate preparation for this program, including business, liberal arts and sciences, and the health professions.

In addition to the MPH coursework listed under "Common Requirements," the policy and administration subprogram requires the following courses. Policy subprogram students may count either HMP:5005 Introduction to Healthcare Organization and Policy or HMP:4000 Introduction to the U.S. Health Care System for the "Common Requirements."

Policy Subprogram Core

Course #	Title	Hours
All of these:		
HMP:5450	Health Insurance and Managed Care	3
HMP:5610	Health Policy	3
HMP:5650	Health Policy Analysis	3
HMP:6610	Legal Aspects of Healthcare	2-3
HMP:6750	Seminar in Health Policy	3

If HMP:5650 Health Policy Analysis is not offered during the semester, students can replace it with HMP:6710 Federalism and Health Policy (odd years) or HMP:5750 Medicare and Medicaid Policy (even years).

Policy Electives

Students fulfill the remainder of the 42 s.h. with elective courses selected from the following.

Course #	Title	Hours
At least 6 s.h. chosen from these:		
HMP:5230	Population Health	1,3
HMP:5320	Analytics for Healthcare Management	3
HMP:5310	Healthcare Quality and Operations Management	3
HMP:5350	Hospital Organization and Management	2-3
HMP:5410	Health Economics I	3
HMP:5750	Medicare and Medicaid Policy	3
HMP:6350	Medical Practice Administration	3
HMP:6360	Nonprofit Organizational Effectiveness I	3
HMP:6710	Federalism and Health Policy	3
HMP:6850	Independent Study and Research	arr.
HMP:7550	Cost Effectiveness and Decision Analysis	3
HMP:7940	Primary Data and Mixed Methods	3
LAW:8562	Health Law	3
POLI:3100	American State Politics	3

Practicing Veterinarians Subprogram

The practicing veterinarians subprogram is not currently accepting new applicants. Students interested in pursuing this program should inquire about the practicing professionals subprogram.

The Master of Public Health with the practicing veterinarians subprogram requires a minimum of 42 s.h. of graduate credit. The program is presented through a collaboration between the University of Iowa College of Public Health and the College of Veterinary Medicine at Iowa State University and is offered primarily by distance learning. It enables students to prepare for new career opportunities and equips

them to respond to public health challenges such as zoonotic diseases, food security and foodborne illnesses, bioterrorism, and environmental health.

Students participate in two summer institutes, one on each campus during consecutive summers (two weeks in May or June); the rest of the program is online and students may complete requirements at times that fit their schedules. Specific courses are required each semester of the program.

In addition to the MPH coursework listed under "Common Requirements," the practicing veterinarians subprogram requires the following courses.

Practicing Veterinarians Subprogram Core

Course #	Title	Hours
All of these:		
CPH:6700	Public Health Emergency Preparedness for Veterinarians and Other Public Health Disciplines	3
EPID:5300	Food Safety	3
EPID:5470	Applied Veterinary Epidemiology/Biostatistics	3
EPID:5540	Public Health Surveillance Mechanisms, Applications, and Data	3
EPID:5550	Diagnostic Microbiology for Epidemiology	3
EPID:5570	Zoonotic Diseases	3
OEH:6110	Rural Health and Agricultural Medicine	3

Practicing Professionals Subprogram

The Master of Public Health with the practicing professionals subprogram is an individually defined concentration, requiring a minimum of 42 s.h. of graduate credit. Students and their advisor(s) identify courses to expand on foundational knowledge and skills and select a set of five competencies and corresponding courses for the individual student's plan of study from a preapproved list. Students have the option to complete this program in a hybrid modality.

Individuals who have already earned a professional degree may choose to complete the MPH practicing professionals subprogram, allowing greater flexibility in course selection. Typically, students who pick this subprogram are fellows, medical residents, practicing nurses, or physicians. Completion of the subprogram can enhance physicians' ability to receive primary certification from the American Board of Preventive Medicine. Physicians who are considering this certification should review the Become Certified requirements on the American Board of Preventive Medicine website. Students may take core courses on campus or online, accommodating a variety of schedules. Students work closely with their advisor to develop a plan of study that is tailored to their specific background and goals.

In addition to the MPH coursework listed under "Common Requirements," the practicing professionals subprogram requires the following courses.

Practicing Professionals Subprogram Core

In consultation with their academic advisor, students must select a set of five competencies mapped to corresponding courses for a minimum of 9 s.h. of graduate credit. Several competencies are available in each of the following areas: biostatistics [p. 5], community and behavioral health

[p. 5], epidemiology [p. 5], health management and policy [p. 6], occupational and environmental health [p. 6], professional [p. 6], and veterinary [p. 6].

Under certain circumstances, a student may be able to apply one course to two competency areas and thus be required to complete additional elective coursework to meet the 42 s.h. of graduate credit required to complete this subprogram. See MPH Concentration Competency Mapping on the College of Public Health website for a list of competencies.

Courses Mapped to Biostatistics Competencies

Students may select from biostatistics (BIOS) competencies numbered one through five.

Course #	Title	Hours
One of these (BIOS competency 1, 2, or 3):		
BIOS:5120	Regression Modeling and ANOVA in the Health Sciences	3
BIOS:5720	Biostatistical Methods II	4
One of these (BIOS competency 4):		
BIOS:4510	Data Science Foundations in R	2
BIOS:5510	Biostatistical Computing	2
One of these (BIOS competency 5):		
BIOS:5130	Applied Categorical Data Analysis	3
BIOS:5730	Biostatistical Methods in Categorical Data	3

Courses Mapped to Community and Behavioral Health Competencies

Students may select from community and behavioral health (CBH) competencies numbered one through seven.

Course #	Title	Hours
CBH:5220	Health Behavior and Health Education (CBH competency 1)	3
CBH:5305 & CBH:6205	Evaluation: Approaches and Applications and Designing and Implementing Interventions (CBH competency 5)	6
CBH:6230	Health Equity, Disparities, and Social Justice (CBH competency 3 or 6)	3
Both of these (CBH competency 2):		
CBH:6335	Research Methods in Community and Behavioral Health	3
CBH:5310	Qualitative Research for Public Health	3
or CBH:5235	Community-Based Participatory Research	
One of these (CBH competency 4 or 7):		
CBH:6205	Designing and Implementing Interventions	3
CBH:6220	Health Communication Campaigns	3

Courses Mapped to Epidemiology Competencies

Students may select from epidemiology (EPID) competencies numbered one through seven.

Course #	Title	Hours
EPID:5540	Public Health Surveillance Mechanisms, Applications, and Data (EPID competency 3)	3
EPID:5580	Public Health Laboratory Techniques (EPID competency 1)	1
EPID:5600	Introduction to Epidemiology Data Management and Analysis (EPID competency 5)	3
EPID:6400	Epidemiology II: Advanced Methods (EPID competency 4, 6, or 7)	4
Both of these (EPID competency 2):		
EPID:5610	Intermediate Epidemiology Data Analysis With SAS and R	3
BIOS:5120	Regression Modeling and ANOVA in the Health Sciences	3

Courses Mapped to Health Management and Policy Competencies

Students may select from health management and policy (HMP) competencies numbered one through five.

Course #	Title	Hours
HMP:5610	Health Policy (HMP competency 1 or 4)	1-3
HMP:6610	Legal Aspects of Healthcare (HMP competency 3)	2-3
HMP:6750	Seminar in Health Policy (HMP competency 5)	2-3
One of these (HMP competency 2):		
HMP:5650	Health Policy Analysis	3
HMP:5750	Medicare and Medicaid Policy	3
HMP:6710	Federalism and Health Policy	3

Courses Mapped to Occupational and Environmental Health Competencies

Students may select from occupational and environmental health (OEH) competencies numbered one through six.

Course #	Title	Hours
OEH:5620	Occupational Health (OEH competency 5 or 6)	3
OEH:6110	Rural Health and Agricultural Medicine (OEH competency 1 or 2; also see "Professional Competencies")	3
OEH:6230	Applied Environmental Health (OEH competency 3 or 4)	3

Courses Mapped to Professional Competencies

Students may select from professional (PROF) competencies numbered one through three.

Course #	Title	Hours
OEH:6110	Rural Health and Agricultural Medicine (PROF competency 2 or 3; also see "Occupational and Environmental Health Competencies")	3
One of these (PROF competency 1):		
EPID:5500	Introduction to Clinical Epidemiology	3
EPID:6910	Pharmacoepidemiology and Comparative Effectiveness Research	3

Courses Mapped to Veterinary Competencies

Students may select from veterinary (VET) competencies numbered one through six.

Course #	Title	Hours
CPH:6700	Public Health Emergency Preparedness for Veterinarians and Other Public Health Disciplines (VET competency 4 or 5)	3
EPID:5300	Food Safety (VET competency 3)	3
or EPID:5570	Zoonotic Diseases	
EPID:5570	Zoonotic Diseases (VET competency 1, 2, or 3)	3
OEH:6110	Rural Health and Agricultural Medicine (VET competency 6)	3

Professional Electives

Students earn the remainder of credit for their degree (typically 12 s.h.) in elective courses from biostatistics (prefix BIOS), community and behavioral health (prefix CBH), public health (prefix CPH), epidemiology (prefix EPID), health management and policy (prefix HMP), or occupational and environmental health (prefix OEH) courses numbered 3000 and above. Additional graduate courses may be eligible to count as electives but must be preapproved.

Exceptions

Petitions to waive these regulations may be made for appropriate and justifiable reasons on behalf of any graduate student through the department executive to the assistant dean for student services. Petitions must be approved by both the College of Public Health and the Graduate College.