

ADDENDUM TO
UTHealth School of Public Health
2018-2020 Catalog
(changes are effective Fall 2019, unless otherwise noted)

CURRENT: page 8

1. *UTHealth School of Public Health mission, vision, values updated*

Mission

The mission of UTHealth School of Public Health is to improve the health of the people of Texas, the nation and the world by providing the highest quality graduate education, translational research, and service to the profession and community.

CHANGE TO:

Our mission: Changing the culture of health through excellence in graduate education, research and engagement.

The vision: Health without boundaries.

Values:

- Collaborate
 - Lead
 - Transform
 - Diversify
-

CURRENT: page 6

1. *Administrative positions updated*

Brian C. Miller, JD (*deleted*)
Director of Research Services

Erin Meade (*deleted*)
Director of Development

Kristina D. Mena, MSPH, PhD
Interim Campus Dean
El Paso Campus

Sally W. Vernon, PhD
Chair
Department of Health Promotion and Behavioral Sciences

CHANGE TO:

Kristina D. Mena, MSPH, PhD
Campus Dean
El Paso Campus

Christine Markham, PhD
Interim Chair
Department of Health Promotion and Behavioral Sciences

CURRENT: page 13

1. *Online MPH in Epidemiology available*
2. *New student enrollment in MPH Biostatistics and MS Epidemiology will be discontinued effective Spring 2020*

	Houston	Austin	Brownsville	Dallas	El Paso	San Antonio
Master of Public Health - MPH						
Biostatistics	✓					
Community Health Practice	✓					
Customized	✓	✓	✓	✓	✓	✓
Environmental Health	✓				✓	✓
Epidemiology	✓	✓	✓	✓		✓
Health Promotion/Health Education	✓	✓	✓	✓	✓	✓
Healthcare Management	✓					
Health Services Organizations	✓					
Master of Science - MS						
Biostatistics	✓					
Epidemiology	✓	✓	✓	✓		✓
Doctor of Public Health - DrPH						
Community Health Practice	✓					
Health Promotion/Health Education	✓	✓	✓	✓	✓	
Doctor of Philosophy - PhD						
Behavioral Sciences and Health Promotion	✓	✓		✓		
Biostatistics	✓					
Environmental Science - Total Worker Health	✓				✓	✓
Environmental Science - Environmental Disease Prevention	✓				✓	✓
Epidemiology	✓	✓	✓	✓		✓
Health Economics and Health Services Research	✓					
Healthcare Management	✓					

CHANGE TO:

	Houston	Austin	Brownsville	Dallas	El Paso	San Antonio	Online
Master of Public Health - MPH							
Biostatistics <i>(new student enrollment in this program will be discontinued effective Spring 2020)</i>	✓						
Community Health Practice	✓						
Customized	✓	✓	✓	✓	✓	✓	
Environmental Health	✓				✓	✓	
Epidemiology	✓	✓	✓	✓		✓	✓
Health Promotion/Health Education	✓	✓	✓	✓	✓	✓	
Healthcare Management	✓						
Health Services Organizations	✓						
Master of Science - MS							
Biostatistics	✓						
Epidemiology <i>(new student enrollment in this program will not be accepted effective Spring 2020)</i>	✓	✓	✓	✓		✓	

Doctor of Public Health - DrPH							
Community Health Practice	✓						
Health Promotion/Health Education	✓	✓	✓	✓	✓		
Doctor of Philosophy - PhD							
Behavioral Sciences and Health Promotion	✓	✓		✓			
Biostatistics	✓						
Environmental Science - Total Worker Health	✓				✓	✓	
Environmental Science - Environmental Disease Prevention	✓				✓	✓	
Epidemiology	✓	✓	✓	✓		✓	
Health Economics and Health Services Research	✓						
Healthcare Management	✓						

CURRENT: pages 14-15

1. *Dietetic Internship from Customized MPH option removed*
2. *Coursework requirements updated*
3. *Degree requirements updated*
4. *Practicum requirements updated*

Customized MPH Program

The customized MPH program is available to many of our MPH students. Students eligible for the customized MPH program include:

- students admitted to any dual degree program
- students located at any SPH campus that does not offer the degree being pursued; and
- students in the Dietetic Internship.

Students eligible for the customized MPH have the option of electing an MPH major or of electing a customized MPH degree plan. Students eligible to elect the customized MPH program will be required to complete a career goal analysis process, which includes identifying career and educational goals followed by curriculum planning with their advisor. Students will work with their advisor to select a minimum of 5 competencies to be met in an advanced public health area. These competencies are in addition to the MPH core competencies.

Degree Requirements

- Satisfactory completion of a prescribed course of study of at least one (1) academic year, a minimum of 45 semester credit hours (only three (3) credit hours of practicum and three (3) credit hours of thesis or culminating experience count toward the minimum of 45 semester credit hours; therefore at least 39 credit hours of courses other than practicum, thesis or culminating experience must be successfully completed), and demonstration of a breadth of knowledge in the disciplines basic to public health;
- Satisfactory completion of a planned, supervised, and evaluated practice experience (practicum) that includes the application of public health science and theory;
- Satisfactory completion of the Capstone Course or culminating experience document, written in English, demonstrating a substantial knowledge of public health; and
- Satisfactory delivery of an oral presentation of the culminating experience project. All completed written culminating experience documents will be made available to the general public.

Practicum

The practicum, or applied practice experience, is an essential part of the MPH curriculum and is a requirement of the Council on Education for Public Health (CEPH, the accrediting body of all U.S. schools of public health) for completion of the MPH degree. The practicum consists of an organized internship at an extramural agency or organization engaged in work related to public health. Alternatively, the practicum may be done intramurally if the project interacts with practice agencies. Students are expected to spend of at least 12 hours per week

(approximately 180-200 hours total) working on the practicum project. Registration for the practicum seminar is required during the semester of the practicum.

CHANGE TO:

Customized MPH Plan

The MPH Customized plan is available to many of our MPH students. Students eligible for the customized MPH program include:

- students admitted to any dual degree program, and
- students located at any SPH campus that does not offer the degree being pursued (all degree programs and majors are available at the Houston campus).

Students in the MPH Customized will work with their advisor to select and complete a minimum of nine credit hours of advanced public health coursework that meets a minimum of five unique competencies. All MPH Customized students complete the MPH core courses that are designed to meet the MPH Foundational Competencies set forth by the Council on Education for Public Health (CEPH).

Degree Requirements

- Satisfactory completion of a defined course of study of a minimum of 45 semester credit hours (only three (3) credit hours of practicum and three (3) credit hours of integrative learning experience; therefore at least 39 credit hours of courses other than practicum and integrative learning experience must be successfully completed);
- Satisfactory completion of **PH 101 Foundations in Public Health** (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH) within the first year of the student's program;
- Satisfactory completion of a planned, supervised, and evaluated applied practice experience (practicum); and
- Satisfactory completion of the integrative learning experience (capstone course, independent ILE or traditional academic thesis), demonstrating a substantial knowledge of public health.

Practicum

The applied practice experience, or practicum, is an essential part of the MPH curriculum and is required by the Council on Education for Public Health (CEPH, the accrediting body of all U.S. schools of public health) for completion of the MPH degree. The practicum consists of an organized internship at an extramural agency or organization engaged in work related to public health. The practicum experience requires that students demonstrate attainment of at least five competencies, of which at least three must be MPH Foundational Competencies. Students are expected to spend of at least 12 hours per week at their practicum site (approximately 180-200 hours total). Students must produce two final products from their practicum experience.

CURRENT: pages 17-18

1. *Minor requirement for MS in Biostatistics updated*
2. *Breadth of knowledge requirement deleted*
3. *Degree requirements updated*

Students are encouraged to draw upon the resources of the school, but may also work with faculty at other institutions of higher learning in Houston. The academic plan is guided by the faculty advisor, the student, and the advisory committee to advance the student's specific educational goals. A student elects one field as a major and selects another public health discipline as a minor area of study. Most full-time MS students take at least two (2) years to complete all degree requirements. The full range of courses to support a minor or breadth area may not be available at all campuses.

Degree Requirements

- Satisfactory completion of a prescribed course of study, including one major and one minor, of at least one (1) academic year and at least 36 semester credit hours. If the student chooses a practicum, no more than three (3) credit hours of practicum and three (3) credit hours of thesis count toward the minimum of 36 credit hours. If the student does not choose a practicum, no more than six (6) semester credit hours of the 36-credit hour minimum may be earned for thesis research. Therefore, at least 30 credit hours of courses other than practicum or thesis must be successfully completed);
- Satisfactory completion of the breadth of knowledge requirement: **PHM 2612 Epidemiology I**
- Satisfactory completion of a research thesis, written in English, deemed by the faculty to be of excellent quality and to demonstrate an appropriate depth of knowledge in the field of study. If approved by the student's advisory committee, a student may elect to include an article of publishable quality consistent with the standards of a peer-reviewed journal. The article is a part of the final submission to the Office of Research and contains all supporting elements of an acceptable research thesis; and
- Satisfactory delivery of an oral presentation of their thesis defense. All completed theses will be made available to the general public.

All courses taken by students count toward their degree, but no more than six (6) semester credit hours of the 36-credit hour minimum may be earned for thesis research.

MS Public Health Breadth of Knowledge Requirement

To ensure that MS students cover the public health breadth of knowledge and achieve related competencies in their degree program, which includes the ability to synthesize and apply their public health communication, professionalism, and leadership skills to a public health problem, MS students will be required to successfully complete the following course in the first year of their MS degree program: **PHM 2612 Epidemiology I**

CHANGE TO:

Students are encouraged to draw upon the resources of the school when completing their thesis, but may also work with faculty at other institutions of higher learning in Houston. The academic plan is guided by the student, the faculty advisor, and the student's thesis advisory committee to advance the student's specific educational and professional goals. A student elects one field as a major and selects another public health discipline as a minor area of study (optional for Biostatistics majors, effective Fall 2019). Most full-time MS students take at least two (2) years to complete all degree requirements. The full range of courses to support a minor may not be available at all campuses.

Degree Requirements

- Satisfactory completion of the defined course of study, including one major and one minor (optional for Biostatistics majors, effective Fall 2019), and a minimum of 36 semester credit hours. If the student chooses a practicum, no more than three (3) credit hours of practicum and three (3) credit hours of thesis count toward the minimum of 36 credit hours. If the student does not choose a practicum, no more than six (6) semester credit hours of the 36-credit hour minimum may be earned for thesis research. Therefore, at least 30 credit hours of coursework other than practicum or thesis must be successfully completed;
- Satisfactory completion of **PH 101 Foundations in Public Health** (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH) within the first year of the student's program;
- Satisfactory completion of a research thesis deemed by the faculty to be of excellent quality and to demonstrate an appropriate depth of knowledge in the field of study. If approved by the student's advisory committee, a student may elect to include an article of publishable quality consistent with the standards of a peer-reviewed journal. The article is a part of the final submission to the Office of Research and contains all supporting elements of an acceptable research thesis; and

- Satisfactory oral presentation and defense of their thesis. Successful completion of the thesis includes a public presentation. This presentation may be based on either the proposal or on the completed project. The decision as to when to conduct the oral presentation is determined by the student the advisory committee. All completed theses will be made available to the general public.

CURRENT: pages 19-20

1. *DrPH credit hour increased to 54 credit hours from 48 credit hours*
2. *Breadth requirement deleted*
3. *Degree requirements updated*
4. *Practicum requirements updated*

The Doctor of Public Health (DrPH) degree signifies distinguished scholarly accomplishment. The DrPH degree is a minimum of 48 semester credit hours.

In order to complete a degree with appropriate public health breadth, DrPH students are required to complete either one minor area of study (nine (9) credit hours) in one of the five public health disciplines (separate from the major area) and one public health breadth (a 9-credit hour course of study around a topical or methodological theme), or complete two minors. The disciplinary minor is based on the student's degree plan and the required minor courses from the department. The full range of courses to support a minor or breadth area may not be available at all campuses.

Degree Requirements

- Satisfactory completion of a prescribed course of study, comprising a minimum of at least 48 semester credit hours (only three (3) credit hours of practicum and six (6) credit hours of dissertation count toward the minimum of 48 credit hours; therefore, at least 39 credit hours of courses other than practicum, thesis, or dissertation must be successfully completed). A minor or breadth area is required;
- Satisfactory completion of an original research dissertation, written in English, that makes a substantial contribution to knowledge in the public health sciences. The dissertation requirement will be fulfilled when an oral defense of the dissertation research proposal and of the completed dissertation have been successfully completed, the document has been approved and signed by all members of the dissertation committee, and a copy has been filed in the Dean's Office. All completed dissertations will be made available to the public.

Practicum

The DrPH practicum, or applied practice experience, is designed to:

- Relate to the student's academic goals and professional interests, as well as specific learning objectives
- Provide opportunities for professional advancement of specific competencies that the student has not yet mastered in their coursework or prior professional experience
- Facilitate the application of public health leadership principles to address a need identified by the host organization through service learning
- Demonstrate the student's application of public health concepts through observational and performance-based evaluation by the preceptor, faculty, and student
- Provide experiences in developing advocacy and/or leadership skills through collaboration with senior public health practitioners

Students are expected to spend a total of at least 180-200 hours total at the practicum site. Community preceptors, selected based on evidence of specific skills, provide extensive mentoring to students.

Dissertation Committee

The defense of the dissertation proposal is the second part of the student's candidacy process. Upon successful completion of the preliminary examination, students will constitute a dissertation committee composed of a dissertation advisor from the student's major department, who may or may not be the academic advisor, and two

other members knowledgeable in the breadth and, or minor areas of interest. The dissertation committee will help develop a curriculum that supports the student's research and career goals. This committee can be changed as research interests become more focused. The dissertation committee will also be responsible for evaluating the oral defense of the dissertation research proposal and the oral defense of the completed dissertation. The committee membership must be approved by the Director for Academic Affairs and Student Services.

CHANGE TO:

The Doctor of Public Health (DrPH) degree signifies distinguished scholarly accomplishment. The DrPH degrees in Community Health Practice and Health Promotion/Health Education both require a minimum of 54 semester credit hours (effective Fall 2019).

In order to complete a degree with appropriate public health breadth, DrPH students are required to complete one minor area of study (nine (9) credit hours) in one of the available public health disciplines, separate from the major area (effective Fall 2018). Students should discuss their minor area of interest with their advisor to determine the required minor coursework. The full range of courses to support a minor may not be available at all campuses.

Degree Requirements

- Satisfactory completion of a defined course of study in the DrPH degrees in Community Health Practice and Health Promotion/Health Education, comprising a minimum of at least 54 semester credit hours (a maximum of three (3) credit hours of practicum and six (6) credit hours of dissertation count toward the minimum of 54 credit hours; therefore, at least 45 credit hours of coursework other than practicum and dissertation must be successfully completed). A minor is required;
- Satisfactory completion of **PH 101 Foundations in Public Health** (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH) within the first year of the student's program;
- Satisfactory performance (i.e., demonstrated competency) on a preliminary examination as defined by the degree program. The preliminary examination may be taken after the courses defined by the degree program have been successfully completed;
- Satisfactory defense of the dissertation proposal; and
- Satisfactory completion of an original research dissertation, through which the student produces field-based products consistent with advanced practice and are designed to influence programs, policies, or systems addressing public health. The dissertation requirement will be fulfilled when an oral defense of the dissertation research proposal and of the completed dissertation have been successfully completed, the document has been approved and signed by all members of the dissertation committee, and a copy has been filed in the Dean's Office. All completed dissertations will be made available to the public.

Practicum

The practicum, or applied practice experience, is an essential part of the DrPH curriculum and is required by the Council on Education for Public Health (CEPH, the accrediting body of all U.S. schools of public health) for completion of the DrPH degree. The DrPH practicum is designed to relate to the student's academic goals and professional interests. Students work with their faculty advisor or other faculty mentor to identify an appropriate advanced-level practicum experience that is meaningful for an organization and that advances public health practice. The DrPH program ensures that students have significant advanced-level practical experiences collaborating with practitioners, allowing opportunities to develop leadership competencies and contribute to the field. Students must choose at least five competencies from DrPH Foundational Competencies or DrPH major-specific competencies, which are primarily taught and assessed in the required coursework for the given major, with at least one leadership competency. DrPH students must complete at least one (minimum) final product and a reflection paper. Students must complete at least 180 hours at one or more practicum sites, which must be in a non-academic setting, unless the setting is externally facing, engaged in the community, and prior approval is obtained.

Dissertation Committee

The defense of the dissertation proposal is the second part of the student's candidacy process. Upon successful completion of the preliminary examination, students will constitute a dissertation committee comprised of a dissertation advisor from the student's major department, who may or may not be the academic advisor, and another member knowledgeable in the minor. The dissertation committee will help develop a curriculum that supports the student's research and career goals. This committee can be changed as research interests become more focused. The dissertation committee will also be responsible for evaluating the oral defense of the dissertation research proposal and the oral defense of the completed dissertation, as well as the final written product. The committee membership must be approved by the Office of Academic Affairs and Student Services.

CURRENT: pages 24-26

1. *Degree requirements updated*
2. *Dissertation committee verbiage updated*

Degree Requirements

- For students with a master's degree, satisfactory completion of a prescribed course of study of at least one (1) academic year and a minimum of at least 48 semester credit hours (only three (3) credit hours of practicum, if taken), and six (6) credit hours of dissertation count toward the minimum of 48 credit hours; therefore, at least 39 credit hours of courses other than practicum, thesis, or dissertation); for students with a bachelor's degree, satisfactory completion of a prescribed course of study of at least one (1) academic year and a minimum of at least 72 semester credit hours. Two minors or a minor and a breadth area are required;
- Satisfactory completion of one epidemiology course, if one is not already covered in the major, minor, or breadth areas;
- Satisfactory performance (i.e., demonstrated competency) on a preliminary examination as described by the degree program. The preliminary examination may be taken after the courses prescribed by the degree program have been successfully completed;
- Satisfactory defense of the dissertation proposal; and
- Satisfactory completion of an original research dissertation, written in English, that makes a substantial contribution to knowledge in the public health sciences. The dissertation requirement will be fulfilled when an oral defense of the dissertation research proposal and of the completed dissertation have been successfully completed, the document has been approved and signed by all members of the dissertation committee, and a copy has been filed in the Dean's Office. All completed dissertations will be made available to the general public.

Dissertation Committee

The defense of the dissertation proposal is the second part of the student's candidacy process. Upon successful completion of the preliminary examination, students will constitute a dissertation committee composed of a dissertation advisor from the student's major department, who may or may not be the academic advisor, and two other members knowledgeable in the breadth and minor areas of interest. The dissertation committee will help develop curriculum that supports the student's research and career goals. This committee can be changed as research interests become more focused. The dissertation committee will also be responsible for evaluating the oral defense of the dissertation research proposal and the oral defense of the completed dissertation. Committee membership must be approved by the Director of Academic Affairs and Student Services.

CHANGE TO:

Degree Requirements

- For students with a master’s degree, satisfactory completion of a defined course of study of at least one (1) academic year and a minimum of at least 48 semester credit hours (only three (3) credit hours of practicum, if taken), and six (6) credit hours of dissertation count toward the minimum of 48 credit hours; therefore, at least 39 credit hours of courses other than practicum, thesis, or dissertation); for students with a bachelor’s degree, satisfactory completion of a defined course of study of at least one (1) academic year and a minimum of at least 72 semester credit hours. Two minors or a minor and a breadth area are required;
- Satisfactory completion of **PH 101 Foundations in Public Health** (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH) within the first year of the student’s program;
- Satisfactory completion of one epidemiology course, if one is not already covered in the major, minor, or breadth areas;
- Satisfactory performance (i.e., demonstrated competency) on a preliminary examination as defined by the degree program. The preliminary examination may be taken after the courses defined by the degree program have been successfully completed;
- Satisfactory defense of the dissertation proposal; and
- Satisfactory completion of an original research dissertation that makes a substantial contribution to knowledge in the public health sciences. The dissertation requirement will be fulfilled when an oral defense of the dissertation research proposal and of the completed dissertation have been successfully completed, the document has been approved and signed by all members of the dissertation committee, and a copy has been filed in the Dean’s Office. All completed dissertations will be made available to the general public.

Dissertation Committee

The defense of the dissertation proposal is the second part of the student’s candidacy process. Upon successful completion of the preliminary examination, students will constitute a dissertation committee comprised of a dissertation advisor from the student’s major department, who may or may not be the academic advisor, and two other members knowledgeable in the breadth and minor areas of interest. The dissertation committee will help develop curriculum that supports the student’s research and career goals. This committee can be changed as research interests become more focused. The dissertation committee will also be responsible for evaluating the oral defense of the dissertation research proposal and the oral defense of the completed dissertation, as well as the final written product. Committee membership must be approved by the Director of Academic Affairs and Student Services.

CURRENT: page 28

1. *Advanced Data Science Certificate added for degree-seeking students; effective Fall 2019*
2. *Advanced Data Science Certificate added for non-degree seeking students; effective Spring 2020*
3. *Global Health Certificate added for non-degree seeking students; effective Spring 2020*
4. *Leadership Theory and Practice Certificate added for degree-seeking students; effective Fall 2019*
5. *Leadership Theory and Practice Certificate added for non-degree-seeking students; effective Spring 2020*
6. *Program Planning and Evaluation Certificate added for degree-seeking students; effective Fall 2019*
7. *Program Planning and Evaluation Certificate added for non-degree-seeking students; effective Spring 2020*

	Houston	Austin	Brownsville	Dallas	El Paso	San Antonio
Graduate Certificates for Degree-Seeking Students						
Clinical Nutrition and Public Health	✓					
Culinary Nutrition and Public Health	✓					

	Houston	Austin	Brownsville	Dallas	El Paso	San Antonio
Data Science	✓	✓	✓	✓	✓	✓
Genomics & Bioinformatics	✓	✓	✓	✓	✓	✓
Global Health	✓	✓	✓	✓	✓	✓
Healthcare Administration	✓	✓	✓	✓	✓	✓
Health Disparities	✓	✓	✓	✓	✓	✓
Maternal & Child Health	✓	✓	✓	✓	✓	✓
Nutrition and Public Health	✓	✓	✓	✓	✓	✓
Physical Activity & Health	✓	✓	✓	✓	✓	✓
Graduate Certificates for Non-Degree Seeking Students						
Clinical Nutrition and Public Health	✓					
Culinary Nutrition and Public Health	✓					
Data Science	✓	✓	✓	✓	✓	✓
Public Health Certificate	✓	✓	✓	✓	✓	✓
Genomics & Bioinformatics	✓	✓	✓	✓	✓	✓
Healthcare Administration	✓	✓	✓	✓	✓	✓
Health Disparities	✓	✓	✓	✓	✓	✓
Maternal & Child Health	✓	✓	✓	✓	✓	✓
Public Health Informatics	✓	✓	✓	✓	✓	✓

CHANGE TO:

	Houston	Austin	Brownsville	Dallas	El Paso	San Antonio
Graduate Certificates for Degree-Seeking Students						
Advanced Data Science	✓	✓	✓	✓	✓	✓
Clinical Nutrition and Public Health	✓					
Culinary Nutrition and Public Health	✓					
Data Science	✓	✓	✓	✓	✓	✓
Genomics & Bioinformatics	✓	✓	✓	✓	✓	✓
Global Health	✓	✓	✓	✓	✓	✓
Healthcare Administration	✓	✓	✓	✓	✓	✓
Health Disparities	✓	✓	✓	✓	✓	✓
Leadership Theory and Practice	✓	✓	✓	✓	✓	✓
Maternal & Child Health	✓	✓	✓	✓	✓	✓
Nutrition and Public Health	✓	✓	✓	✓	✓	✓
Program Planning and Evaluation	✓	✓	✓	✓	✓	✓
Physical Activity & Health	✓	✓	✓	✓	✓	✓
Graduate Certificates for Non-Degree Seeking Students						
Advanced Data Science (available Spring 2020)	✓	✓	✓	✓	✓	✓
Clinical Nutrition and Public Health	✓					
Culinary Nutrition and Public Health	✓					

	Houston	Austin	Brownsville	Dallas	El Paso	San Antonio
Data Science	✓	✓	✓	✓	✓	✓
Genomics & Bioinformatics	✓	✓	✓	✓	✓	✓
Global Health <i>(available Spring 2020)</i>	✓	✓	✓	✓	✓	✓
Healthcare Administration	✓	✓	✓	✓	✓	✓
Health Disparities	✓	✓	✓	✓	✓	✓
Leadership Theory and Practice <i>(available Spring 2020)</i>	✓	✓	✓	✓	✓	✓
Maternal & Child Health	✓	✓	✓	✓	✓	✓
Program Planning and Evaluation <i>(available Spring 2020)</i>	✓	✓	✓	✓	✓	✓
Public Health	✓	✓	✓	✓	✓	✓
Public Health Informatics	✓	✓	✓	✓	✓	✓

Advanced Data Science Certificate (15 semester credit hours)

This certificate is designed for both students and working professionals who intend to elevate their knowledge and skill-set regarding data science processes and their application. This certificate is an extension of the established Data Science Certificate and consists of learning modules in data science crafted to meet the needs of students, employers, and community partners. Topics include data mining, data science computing, and programming in Python and R.

Leadership Theory and Practice (12 semester credit hours)

This certificate provides students with the theories behind leadership excellence as well as discussion on current leadership issues. Courses bring in public health leaders to discuss their leadership styles, past and current issues, and advice for students.

Program Planning and Evaluation Certificate (15 semester credit hours)

This certificate is designed to prepare those in the public health workforce to identify behavioral and environmental determinants of health that are modifiable, and to plan and evaluate effective health promotion programs and policies to promote healthy lifestyles and prevent disease in diverse populations and settings.

CURRENT: page 30

1. *Dietetic Internship section updated*
2. *Industrial Hygiene Description added*
3. *Residency Program in Occupational and Environmental Medicine updated*

Dietetic Internship

The Dietetic Internship Program offers the opportunity to pursue a dietetic internship in conjunction with a graduate degree in public health. This is a two-year program with a program fee of \$5,000 effective Fall 2018. To be eligible to apply for this program, individuals must have a background in nutrition and dietetics and a verification statement from a didactic program in dietetics. Separate applications are required for each program, and admission to one program does not guarantee admission to the other. Applications for fall admission to UTHealth School of Public Health must be received by December 1st of the year prior to anticipated admission; applications for the dietetic internship through DICAS must be received by February 15th. The Dietetic Internship Program is fully accredited by the Academy of Nutrition and Dietetics and participates in their national matching program. The program is also approved by The Accreditation Council for Education in Dietetic. The Dietetic Internship Program provides more than 1200 supervised practice hours in four major areas of dietetics: Public Health Nutrition, Food Service Systems Management, Medical Nutrition Therapy, and Specialty Practice. Students

accepted into the program are placed in affiliated entities and institutions within the Texas Medical Center and throughout the city of Houston and Harris County. The Dietetic Internship Program is administered through the Michael & Susan Dell Center for Healthy Living (www.msdcntr.org). For further information on the Dietetic Internship Program, please see the website at <https://sph.uth.edu/research/centers/dell/dietetic-internship-program/>.

Residency Program in Occupational and Environmental Medicine

The Residency Program in Occupational and Environmental Medicine has been continuously accredited since 1977 by the Accreditation Council for Graduate Medical Education (ACGME) and offers occupational and environmental medicine residency training to qualified physicians in preparation for certification by the American Board of Preventive Medicine. The residency consists of a two-year plan of study (including a specialized MPH curriculum and progressive clinical training). Applicants must possess the MD or DO degree and must have completed a minimum of one (1) year of clinical training in an ACGME-accredited program. Residency application is via the Electronic Residency Application Service (ERAS) of the American Association of Medical Colleges. Candidates not already holding the MPH degree or its equivalent must apply for and achieve admission to the MPH degree program at UTHealth School of Public Health prior to joining the residency. More information on the Residency Program in Occupational and Environmental Medicine can be found on the UTHealth School of Public Health website.

CHANGE TO:

Dietetic Internship

The Dietetic Internship Program offers the opportunity to pursue a dietetic internship in conjunction with a graduate degree in public health. This is a two-year program with a program fee of \$5,000 effective Fall 2018. To be eligible to apply for this program, individuals must have a background in nutrition and dietetics and a verification statement from a didactic program in dietetics. Separate applications are required for each program, and admission to one program does not guarantee admission to the other. Applications for fall admission to UTHealth School of Public Health must be received by December 1st of the year prior to anticipated admission; applications for the dietetic internship through DICAS must be received by February 15th. The Dietetic Internship Program is fully accredited by the Academy of Nutrition and Dietetics and participates in their national matching program. The program is also approved by The Accreditation Council for Education in Dietetic. The Dietetic Internship Program provides more than 1200 supervised practice hours in four major areas of dietetics: Public Health Nutrition, Food Service Systems Management, Medical Nutrition Therapy, and Specialty Practice. Students accepted into the program are placed in affiliated entities and institutions within the Texas Medical Center and throughout the city of Houston and Harris County. The Dietetic Internship Program is administered through the Michael & Susan Dell Center for Healthy Living (www.msdcntr.org). The MPH, Health Promotion/Health Education, Dietetic Internship course of study is outlined in the Health Promotion and Behavioral Sciences section of the catalog. For further information on the Dietetic Internship Program, please see the website at <https://sph.uth.edu/research/centers/dell/dietetic-internship-program/>.

Industrial Hygiene

Industrial hygiene is the science devoted to anticipating, recognizing, evaluating, and controlling environmental factors posing risk to workers and the community, which arise from the workplace. The industrial hygiene curriculum for the MPH is accredited by the Applied Science Accreditation Commission of ABET <https://www.abet.org/>. A high level of faculty/student interaction is emphasized and students typically gain practical experience through summer internships, which offer a wealth of opportunities for training in industrial settings, healthcare, petroleum and petrochemicals, agriculture, and public and private business and government sectors. Industrial hygiene is a discipline within occupational health and safety (OHS), which is a professionally exciting and rewarding field of public health that includes all other aspects of public health such as epidemiology, health promotion, management, global health and wellness, and other disciplines. Being an OHS practitioner helps to save lives of working people and promotes a grounded quality of life for their families and communities. The interdisciplinary curriculum is based on a public health model for practice. Graduates are prepared to

participate in a multi-disciplinary approach to planning, implementing, managing, and evaluating programs and services for worker health and safety. Students who elect to complete the optional Industrial Hygiene curriculum are required to complete the listed 14 credit hours in addition to their Public Health Core Courses, Environmental Health Required Courses, Practicum and Integrative Learning Experience. Students in the Industrial Hygiene program will complete the 14 credit hours of coursework; PH 1700 Intermediate Biostatistics, PH 2155 Environmental Sampling & Analysis, PH 2250 Occupational Health Controls, and PH 2260 Occupational Health Field Trips, in lieu of electives. Students who elect to complete the optional Industrial Hygiene curriculum must select PH 2245 Fundamentals of Industrial Hygiene (4 credits) from the three options listed under the major courses selections in the MPH course of study. Students who elect to complete the optional Industrial Hygiene curriculum will complete a minimum of 51 credit hours per the degree planner.

Residency Program in Occupational and Environmental Medicine

The Residency Program in Occupational and Environmental Medicine has been continuously accredited since 1977 by the Accreditation Council for Graduate Medical Education (ACGME) and offers occupational and environmental medicine residency training to qualified physicians in preparation for certification by the American Board of Preventive Medicine. The residency consists of a two-year plan of study (including a specialized MPH curriculum and progressive clinical training). Applicants must possess the MD or DO degree and must have completed a minimum of one (1) year of clinical training in an ACGME-accredited program. Residency application is via the Electronic Residency Application Service (ERAS) of the American Association of Medical Colleges. Candidates not already holding the MPH degree or its equivalent must apply for and achieve admission to the MPH degree program at UTHealth School of Public Health prior to joining the residency. More information on the Residency Program in Occupational and Environmental Medicine can be found on the UTHealth School of Public Health website. Students who elect to complete the optional Occupational Medicine Residency curriculum are required to complete the listed 13 credit hours in addition to their Public Health Core Courses, Environmental Health Required Courses, Practicum in Occupational Medicine (PH 9997M) and Integrative Learning Experience. Occupational Medicine Residents will complete the 13 credit hours of coursework; PH 2255 Clinical Occupational Medicine, PH 2260 Occupational Health Field Trips, PH 2265 Occupational Medicine Practice (taken twice), PH 2270 Total Worker Health and Worker Well-being, in lieu of electives. Occupational Medicine Residents must select PH 2245 Fundamentals of Industrial Hygiene (4 credits) from the three options listed under the major courses selections in the MPH course of study. Occupational Medicine Residents will complete a minimum of 50 credit hours per the degree planner.

CURRENT: page 40

1. *UTHealth School of Public Health online course fees update. (SPH Web Course Delivered out of State was removed; SPH Web Course Delivered within Texas changed to \$75/per SCH)*

Fees and Charges

Alternative Instruction Delivery Fee –	
SPH Web Course Delivered within Texas	\$50/per semester credit hour
SPH Web Course Delivered out of state	\$750/per semester credit hour

CHANGE TO:

Fees and Charges

Alternative Instruction Delivery Fee –	
SPH Web Course Delivered within Texas	\$75/per semester credit hour

CURRENT: page 41

1. *Course requirements reduced for the Minor in Biostatistics*
2. *PH 1820 title corrected*

Minor in Biostatistics

The department offers a minor course of study (nine (9) semester credit hours) for MS, DrPH, and PhD students who are majoring in other public health disciplines. Courses required for the minor include:

- Masters students: **PHM 1690** *Introduction to Biostatistics in Public Health*, **PH 1700** *Intermediate Biostatistics* and at least two Biostatistics electives above PH 1700
 - Doctoral students: **PHM 1690** *Introduction to Biostatistics in Public Health*, **PH 1700** *Intermediate Biostatistics* and at least three Biostatistics electives above PH 1700
- PH 1820** *Regression Techniques* is strongly recommended as an elective for all students.

CHANGE TO:

Minor in Biostatistics

The department offers a minor course of study (at least nine (9) semester credit hours) for MS, DrPH, and PhD students who are majoring in other public health disciplines. Courses required for the minor include:

- Masters students: **PHM 1690** *Introduction to Biostatistics in Public Health*, **PH 1700** *Intermediate Biostatistics* and at least one Biostatistics elective above PH 1700
 - Doctoral students: **PHM 1690** *Introduction to Biostatistics in Public Health*, **PH 1700** *Intermediate Biostatistics* and at least two Biostatistics electives above PH 1700 (Note: **PHM 1690** *Introduction to Biostatistics in Public Health* is a prerequisite to PH 1700 but may be waived depending on the student's background.)
- PH 1820** *Applied Linear Regression* is strongly recommended as an elective for all students.

CURRENT: page 41

1. *Public Health 101 requirement added*
2. *Major courses requirements updated*
3. *Elective requirements updated*
4. *ILE options updated*

Master of Public Health (MPH) Degree Program

The MPH in Biostatistics is a minimum of 45 semester credit hours and designed to prepare students for positions that require a broad knowledge of public health as well as specialized knowledge of biostatistics. In particular, students will have the opportunity to learn applied biostatistical analysis, statistical theory, study design, data management, and ethics of research.

Course of Study

The following courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Biostatistics:

- Major courses: **PH 1700** *Intermediate Biostatistics*, and **PH 1820** *Regression Techniques*
- At least two courses from: **PH 1821** *Applied Multivariate Analysis for Biostatics*, **PH 1830** *Categorical Data Analysis*, or **PH 1831** *Survival Analysis*
- Biostatistics Electives
- Applied Practice Experience: **PH 9997** *Practicum*
- Integrative Learning Experience: **PHM 1996** *Capstone for BIOS Students* or **PHM 9998** *Thesis Research*

CHANGE TO:

Master of Public Health (MPH) Degree Program *(new student enrollment in this program will be discontinued in Spring 2020)*

The MPH in Biostatistics requires a minimum of 45 semester credit hours and is designed to prepare students for positions that require a broad knowledge of public health as well as specialized knowledge of biostatistics. In

particular, students will have the opportunity to learn applied biostatistical analysis, statistical theory, study design, data management, and ethics of research.

Course of Study

The following courses are required for a MPH student majoring in Biostatistics:

- Other Required Course: **PH 101** *Foundations in Public Health* (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH)
- MPH Core Courses: **PHM 1110, PHM 1690, PHWM 2110, PHM 2612, PHM 3715, & PH 5015**
- Major courses: **PHM 1700** *Intermediate Biostatistics* & **PH 1820** *Applied Linear Regression* & **PH 1821** *Applied Multivariate Analysis for Biostatistics* & **PH 1830** *Categorical Data Analysis* & **PH 1831** *Survival Analysis*
- Six Credit Hours in Biostatistics Electives (1700-1999)
- Applied Practice Experience: **PH 9997** *Practicum*
- Integrative Learning Experience: **PHM 1996** *Capstone for BIO Students* (when completing an independent ILE) OR **PHM 9998** *Culminating Experience/Thesis Research* (when completing a traditional academic thesis)

CURRENT: page 42

1. *Public Health 101 requirement added*
2. *Major courses requirements updated*
3. *Elective requirements updated*
4. *ILE options updated*

Course of Study

The following courses are required, except in the case of a waiver (waiver process varies by program), for an MS student majoring in Biostatistics:

- Leveling Courses: **PHM 1690** *Introduction to Biostatistics in Public Health*; **PH 1700** *Intermediate Biostatistics*
 - *Leveling courses do not count toward the credit-hour minimum for the degree.
- MS Core Courses: **PH 1820** *Applied Linear Regression*; **PH 1821** *Applied Multivariate Analysis*
- Major courses: **PH 1910** *Probability and Distribution Theory*; **PH 1911** *Statistical Inference*; **PH 1830** *Categorical Data Analysis*; **PH 1831** *Survival Analysis*
- Epidemiology Minor: **PH 2612** *Epidemiology I* & 6-credits of epidemiology electives
- Biostatistics Electives
- **PHM 9998** *Thesis Research*

CHANGE TO:

Course of Study

The following courses are required for an MS student majoring in Biostatistics:

- Leveling and Other Required Courses: **PH 101** *Foundations in Public Health* (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH) & **PHM 1690** *Introduction to Biostatistics in Public Health* (academic credits from leveling courses do not count towards the total required number of credits for the degree program)
- Major Courses: **PHM 1700** *Intermediate Biostatistics* & **PH 1820** *Applied Linear Regression* & **PH 1821** *Applied Multivariate Analysis* & **PH 1830** *Categorical Data Analysis* & **PH 1831** *Survival Analysis* & **PH 1910** *Probability and Distribution Theory* & **PH 1911** *Statistical Inference*
- Twelve Credit Hours of Elective Coursework:
 - Students are required to complete 12 credit hours of elective coursework. Students must complete a 3 credit hour epidemiology course of their choice (2600-2999). Students are encouraged to complete elective coursework in biostatistics (1700-1999; not already on the

degree planner). Students should consult with their advisor when selecting elective courses. Students may also elect to complete a minor outside of their department. Students who opt to complete a minor should consult with their advisor and the minor's department for requirements.

- **PHM 9998 Culminating Experience/Thesis Research**

CURRENT: page 43

1. *Course of study for direct admission to the PhD program in biostatistics added*

Direct Admission to the PhD Program

Applicants with a BS or BA degree (or foreign equivalent) in one of these areas with appropriate grounding in mathematics and statistics and who show promise for advanced studies may be admitted directly into the PhD program. Applicants with graduate degrees that are not in one of these areas who have the requisite statistical training may be admitted to the PhD program. All admissions require approval of faculty. The course of study for direct admission to the PhD requires completion of 72 credit hours.

CHANGE TO:

Direct Admission to the PhD Program in Biostatistics

Applicants with a BS or BA degree (or foreign equivalent) in one of these areas with appropriate grounding in mathematics and statistics and who show promise for advanced studies may be admitted directly into the PhD program. Applicants with graduate degrees that are not in one of these areas who have the requisite statistical training may be admitted to the PhD program. All admissions require approval of faculty. The course of study for direct admission to the PhD requires completion of 72 credit hours.

Course of Study

The following courses are required for a direct admit PhD student in Biostatistics:

- Other Required Course: **PH 101 Foundations in Public Health** (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH) Masters Equivalent Coursework: **PHM 1700 Intermediate Biostatistics & PH 1820 Applied Linear Regression* & PH 1821 Applied Multivariate Analysis for Biostatistics* & PH 1830 Categorical Data Analysis* & PH 1910 Probability and Distribution Theory***
- PhD Required Courses: **PH 1831 Survival Analysis* & PH 1911 Statistical Inference* & PHD 1915 Linear Models I* & PH 1916 Generalized Linear Models & PHD 1930 Statistical Computing & PHD 1950 Stochastic Processes in Biostatistics I* & PH 1988 Biostatistics Seminar**
- One breadth and one minor OR two minors
 - Students are required to elect a minor outside their department. Students should consult with their advisor and the minor's department for requirements. Students may choose to complete a breadth or second minor. Students who do not elect an epidemiology minor must complete a three (3) credit hour epidemiology course as part of the breadth (2600-2999). Students who do complete an epidemiology minor must complete a three (3) credit hour course outside of both epidemiology and biostatistics for the breadth. Students who choose to complete a breadth should consult with their advisor to determine which courses are most appropriate for their academic and professional goals. Students who choose to complete a second minor should consult with their advisor and the minor's department for requirements.
- Biostatistics Electives
 - Students are required to complete a minimum of 14 credit hours of electives from any biostatistics course above the 1700 level that is not already required on the degree planner

(1700-1999). Students should consult with their advisor when selecting elective courses coursework appropriate for the student's research and career goals.

- **PHD 1995** *Research Practice Experience for Biostatistics Students*
- **PHD 9999** *Dissertation Research*

Students must successfully complete each course indicated with an asterisk () prior to sitting for the preliminary exam.

CURRENT: page 43

1. *Public Health 101 requirement added*
2. *Leveling and major courses requirements updated*
3. *Breadth/minor and elective requirements updated*
4. *PHD 1995 Research Practice Experience for Biostatistics Students added to course of study*

Course of Study

The following courses are required, except in the case of a waiver (waiver process varies by program), for a PhD student in Biostatistics:

- Leveling Courses: **PHM 1690** *Introduction to Biostatistics in Public Health*; **PH 1700** *Intermediate Biostatistics*; **PH 1820** *Applied Linear Regression*; **PH 1910** *Probability and Distribution Theory*
*Leveling courses are not counted in the credit-hour minimum for the degree.
- Core Courses: **PH 1821** *Applied Multivariate Analysis for Biostatistics*; **PH 1830** *Categorical Data Analysis*; **PH 1911** *Statistical Inference*; **PHD 1915** *Linear Models I*; **PH 1988** *Biostatistics Seminar*
- Major Courses: **PH 1831** *Survival Analysis*; **PHD 1950** *Stochastic Processes for Biostatisticians I*
- One of the following courses to be completed in the first year: **PHM 2612** *Epidemiology I*; **PHD 3620** *Principles and Practice of Public Health*
- One breadth and one minor or two minors
- Biostatistics Electives
- **PHD 9999** *Dissertation Research*

CHANGE TO:

Course of Study

The following courses are required for a PhD student in Biostatistics:

- Leveling and Other Required Courses: **PH 101** *Foundations in Public Health* (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH) & **PHM 1700** *Intermediate Biostatistics* & **PH 1820** *Applied Linear Regression** & **PH 1821** *Applied Multivariate Analysis for Biostatistics** & **PH 1830** *Categorical Data Analysis** & **PH 1910** *Probability and Distribution Theory** (academic credits from leveling courses do not count towards the total required number of credits for the degree program).
- Major Courses: **PH 1831** *Survival Analysis** & **PH 1911** *Statistical Inference** & **PHD 1915** *Linear Models I** & **PH 1916** *Generalized Linear Models* & **PHD 1930** *Statistical Computing* & **PHD 1950** *Stochastic Processes in Biostatistics I** & **PH 1988** *Biostatistics Seminar*
- One breadth and one minor OR two minors
 - Students are required to elect a minor outside their department. Students should consult with their advisor and the minor's department for requirements. Students may choose to complete a breadth or second minor. Students who do not elect an epidemiology minor must complete a 3 credit hour epidemiology course as part of the breadth (2600-2999). Students who do complete an epidemiology minor must complete a three (3) credit hour course outside of both epidemiology and biostatistics for the breadth. Students who choose to complete a breadth should consult with their advisor to determine which courses are most appropriate for their

academic and professional goals. Students who choose to complete a second minor should consult with their advisor and the minor's department for requirements.

- **Biostatistics Electives**
 - Students are required to complete a minimum of five (5) credit hours of electives from any biostatistics course above the 1700 level that is not already required on the degree planner (1700-1999). Students should consult with their advisor when selecting elective courses coursework appropriate for the student's research and career goals.
- **PHD 1995 Research Practice Experience for Biostatistics Students**
- **PHD 9999 Dissertation Research**

Students must successfully complete each course indicated with an asterisk () prior to sitting for the preliminary exam.

CURRENT: page 44

1. *PH 1820 course title corrected*

PH 1820 Regression Techniques
3 credits

CHANGE TO:

PH 1820 Applied Linear Regression
3 credits

CURRENT: page 45

1. *PH 1700 credit hours decreased to 3 credit hours from 4 credit hours*

PH 1700 Intermediate Biostatistics
4 credits

CHANGE TO:

PH 1700 Intermediate Biostatistics
3 credits

CURRENT: page 46

1. *PHD 1912 course added*

CHANGE TO:

PHD 1912 Large Sample Theory
3 credits

Large sample theory constitutes a coherent body of concepts and results that are central to both theoretical and applied statistics, and underlies much of the work on fundamental biostatistical topics such as likelihood ratio tests and bootstrapping. The course will start from the introduction to real analysis including limits and order, and basic probabilistic tools. The fundamental large-sample theory most relevant to biostatistical applications will then be taught, including convergence and large sample tests.

Prerequisites: Calculus & Linear Algebra & PH 1910 & PH 1911

CURRENT: page 49

1. PHD 1995 Research Practice Experience for Biostatistics Students course added
2. PHM 1996 Prerequisites update

PHM 1996 Capstone for BIOS Students

3 credits

This integrative learning experience is designed to demonstrate synthesis of major themes from the MPH core and major-specific courses. Students produce at least one high-quality written product.

CHANGE TO:

PHD 1995 Research Practice Experience for Biostatistics Students

3 credits

A research practice experience is a unique learning experience that PhD students in Biostatistics must acquire. This opportunity allows students to apply classroom education towards a real-world public health work setting.

PHM 1996 Capstone for BIOS Students

3 credits

This integrative learning experience is designed to demonstrate synthesis of major themes from the MPH core and major-specific courses. Students produce at least one high-quality written product.

Prerequisites: Student must be a MPH Biostatistics major; completed the MPH core courses; completed at least 30 semester credit hours the semester before enrolling in capstone; and completed or concurrent enrollment in Practicum, PH 9997.

CURRENT: page 52

1. Public Health 101 requirement to both course of studies added
2. Major course requirements in both course of studies updated
3. Elective requirements in both course of studies updated
4. ILE options updated

Course of Study

The following courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Epidemiology:

- MPH Core: **PHM 1690, PHM 2612, PHM 3715, PHM 1110, PHWM 2110 & PHM 5015**
- Major Courses: **PH 2615 Epidemiology II, PH 2710 Epidemiology III & PH 1700 Intermediate Biostatistics**
- Electives; at least two courses must be Epidemiology courses
- Integrative Learning Experience: **PHM 2996 Capstone for EPID Students or PHM 9998 Thesis Research**
- Applied Practice: **PH 9997 Practicum**

Master of Science (MS) Degree Program

The MS in Epidemiology is a minimum of 36 semester credit hours and is a research degree designed to provide an understanding of epidemiologic concepts, theories, and methodology. To a large extent, this degree program will be arranged by each student, in consultation with the advisory committee, in order to meet the student's specific educational goals. Adequate understanding of human diseases, including their natural history, etiology, pathogenesis, and prevention or control, may require moderate or advanced preparation in related laboratory or environmental sciences. Students are encouraged to draw upon outside resources (academic, governmental, clinical, etc.) in order to acquire knowledge and skills requisite to their specific educational goals.

Course of Study

The following courses are required for an MS student majoring in Epidemiology:

- Major Courses: **PHM 2612 Epidemiology I; PH 2615 Epidemiology II; PH 2710 Epidemiology III; PHM 2720 Epidemiology Proposal Development**

- Required Courses: **PHM 1690** *Introduction to Biostatistics in Public Health* & **PH 1700** *Intermediate Biostatistics*
- Minor from another department
- Electives; at least two courses must be Epidemiology courses
- **PHM 9998** *Thesis Research*

CHANGE TO:

Course of Study

The following courses are required for an MPH student majoring in Epidemiology:

- Other Required Course: **PH 101** *Foundations in Public Health* (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH)
- MPH Core Courses: **PHM 1110**, **PHM 1690**, **PHWM 2110**, **PHM 2612**, **PHM 3715**, & **PH 5015**
- Major Courses: **PHM 1700** *Intermediate Biostatistics* & **PH 2615** *Epidemiology II* & **PH 2710** *Epidemiology III*
- Emphasis Area: Six (6) credit hours of selected epidemiology coursework (2600-2999) in Public Health Practice or Public Health Research. Students should consult with their advisor when selecting which track to complete.
 - Public Health Practice: Students who elect to complete an emphasis area in public health practice should work with their advisor when selecting coursework appropriate for the academic and professional goals.
 - Public Health Research: Students who elect to complete an emphasis area in public health research should work with their advisor when selecting coursework appropriate for the academic and professional goals. Students are strongly encouraged to enroll in **PH 2720** *Epidemiologic Proposal Development* and **PH 2858** *Quantitative Analysis for Public Health Research and Practice*. Students who elect to complete public health research coursework are expected to complete a traditional academic thesis as their integrative learning experience.
- Electives: Six (6) credit hours of elective coursework
- Applied Practice Experience: **PH 9997** *Practicum*
- Integrative Learning Experience: **PHWM 2996** *Capstone for EPID Students* or **PHM 9998** *Culminating Experience/Thesis Research (for students completing an independent ILE or traditional academic thesis)*

Master of Science (MS) Degree Program (*new student enrollment in this program will not be accepted effective Spring 2020*)

The MS in Epidemiology is a minimum of 36 semester credit hours and is a research degree designed to provide an understanding of epidemiologic concepts, theories, and methodology. Adequate understanding of human diseases, including their natural history, etiology, pathogenesis, and prevention or control, may require moderate or advanced preparation in related laboratory or environmental sciences.

Course of Study

The following courses are required for an MS student majoring in Epidemiology:

- Other Required Course: **PH 101** *Foundations in Public Health* (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH)
- Major Courses: **PHM 2612** *Epidemiology I* & **PH 2615** *Epidemiology II* & **PH 2710** *Epidemiology III* & **PHM 2720** *Epidemiology Proposal Development*
- Other Required Courses: **PHM 1690** *Introduction to Biostatistics in Public Health* & **PH 1700** *Intermediate Biostatistics*
- Minor from another department
- Electives: Students are required to complete a minimum of five (5) credit hours of epidemiology electives (2600-2999).
- **PHM 9998** *Thesis Research*

CURRENT: page 53

1. *Course of study for direct admission to the PhD program in epidemiology added*

Direct Admission to the PhD Program

Direct Admission to a PhD Program Applicants with a BA or BS degree (or foreign equivalent) may be directly admitted into the PhD program. Applicants requesting direct admission into the PhD program should have a bachelor's degree that emphasizes the development of strong scientific and analytical skills. Applicants should also provide evidence of solid academic achievement, including successful completion of advanced courses in a biological science and two semesters of college-level calculus courses, as well as demonstrated oral and written communication skills. The course of study for direct admission to the PhD requires completion of 72 credit hours. See "Application Procedures and Deadline Dates" section for a list of required application materials, and "Admissions Process" section for factors considered in the admission decision.

CHANGE TO:

Direct Admission to the PhD Program in Epidemiology

Direct Admission to a PhD Program Applicants with a BA or BS degree (or foreign equivalent) may be directly admitted into the PhD program. Applicants requesting direct admission into the PhD program should have a bachelor's degree that emphasizes the development of strong scientific and analytical skills. Applicants should also provide evidence of solid academic achievement, including successful completion of advanced courses in a biological science and two semesters of college-level calculus courses, as well as demonstrated oral and written communication skills. The course of study for direct admission to the PhD requires completion of 72 credit hours. See "Application Procedures and Deadline Dates" section for a list of required application materials, and "Admissions Process" section for factors considered in the admission decision.

Course of Study

Students pursuing a PhD in Epidemiology are required to select one disciplinary minor area of study and one defined breadth area of study or two minor areas of study. While the breadth may be selected from among the areas of study offered by the Department of Epidemiology, Human Genetics and Environmental Sciences, the other must be chosen from a different department. For example, a student might minor in biostatistics and develop a breadth area of study in genetics.

The following courses are required for a direct admit PhD student majoring in Epidemiology:

- Other Required Course: **PH 101 Foundations in Public Health** (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH)
- Masters Equivalent Coursework: **PHM 1690 Introduction to Biostatistics in Public Health & PH 1700 Intermediate Biostatistics & PHM 2612 Epidemiology I & PH 2615 Epidemiology II & PH 2710 Epidemiology III**
- PhD Required Courses: **PHD 2711 Epidemiology IV*** & **PHD 2712 Experimental Methods in Epidemiology*** & **PHD 2990 Epidemiology Seminar and Journal Club** & Six (6) credit hours from the selections below:
 - Three (3) credit hours of a selected required course: **PHD 2770 NIH Proposal Development OR PHD 2720 Epidemiology Proposal Development**
 - Three (3) credit hours of a selected required course*: **PH 1830 Categorical Data Analysis AND/OR PH 1831 Survival Analysis**
- One breadth and one minor OR two minors
- Elective courses: 19-22 credit hours. Students are required to complete a minimum of nine (9) credit hours of elective coursework within the epidemiology department (2600-2999). One epidemiology elective* (2600-2999) is required prior to sitting for the epidemiology preliminary exam.

- **PHD 9999 Dissertation Research**

Students must successfully complete each course indicated with an asterisk () prior to sitting for the preliminary exam.

CURRENT: page 53

1. *Public Health 101 requirement added*
2. *Leveling and major courses requirements updated*
3. *Elective requirements updated*

Course of Study

The following courses are required for a PhD student majoring in Epidemiology:

- Major courses: **PHD 2711 Epidemiology IV**; **PHD 2712 Experimental Methods in Epidemiology**; **PHD 2770 NIH Proposal Development OR PHD 2720 Epidemiology Proposal Development**; **PHD 2990 Epidemiology Seminar**; **PH 1830 Categorical Data Analysis AND/OR PH 1831 Survival Analysis**
- Required course: **PHM 2612 Epidemiology I**
- One breadth and one minor or two minors
- Elective courses, at least one course must be an Epidemiology course
- **PHD 9999 Dissertation Research**

CHANGE TO:

Course of Study

The following courses are required for a PhD student majoring in Epidemiology:

- Leveling and Other Required Courses: **PH 101 Foundations in Public Health** (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH) & **PHM 2612 Epidemiology I & PH 2615 Epidemiology II & PH 2710 Epidemiology III & PHM 1690 Introduction to Biostatistics in Public Health & PH 1700 Intermediate Biostatistics (academic credits from leveling courses do not count towards the total required number of credits for the degree program)**
- Major Courses: **PHD 2711 Epidemiology IV*** & **PHD 2712 Experimental Methods in Epidemiology*** & **PHD 2990 Epidemiology Seminar and Journal Club** & Six (6) credit hours from the selections below:
 - Three (3) credit hours of a selected required course: **PHD 2770 NIH Proposal Development OR PHD 2720 Epidemiology Proposal Development**
 - Three (3) credit hours of a selected required course*: **PH 1830 Categorical Data Analysis AND/OR PH 1831 Survival Analysis**
- One breadth and one minor OR two minors
- Elective courses: 11-14 credit hours. Students are required to complete a minimum of six (6) credit hours of elective coursework within the epidemiology department (2600-2999). One epidemiology elective* (2600-2999) is required prior to sitting for the epidemiology preliminary exam.
- **PHD 9999 Dissertation Research**

Students must successfully complete each course indicated with an asterisk () prior to sitting for the preliminary exam.

CURRENT: page 56

1. *PH 2742 course added*

PH 2742 Epidemiology of Mental Health
3 credits

This course reviews descriptive and analytic epidemiology for major mental health symptoms and conditions worldwide. Course topics include understanding: functional and societal burden of mental health conditions, psychiatric epidemiology research designs, causality in mental health, cross-societal comparisons, risk factors and protective factors, plus an overview of treatment, health systems, and prevention.
Prerequisites: One of either PHM 2610, PHM 2612, PHD 1420, PHD 1421, PHW 3660 or permission of instructor.

CURRENT: page 59

1. *PH 2820 removed*

PH 2820 *Introduction to Human Molecular Genetics*

3 credits

This course provides a comprehensive overview of human genetics and the role of genes in human disease. The course is taught by instructors from UTHealth School of Public Health and The University of Texas MD Anderson Cancer Center, and consists of a series of lectures from instructors and guest lecturers. While a wide range of topics are covered, many lectures focus on cancer biology and genetics. [Cross-listed with GSBS GS110023]

Prerequisites: Consent of instructor. Undergraduate biochemistry, cell biology, and genetics

CHANGE TO: (removed)

CURRENT: page 60

1. *PH 2858 added*

CHANGE TO:

PH 2858 *Quantitative Analysis for Public Health Research and Practice*

3 credits

This course bridges epidemiological and biostatistical skillsets. The overall objective is to provide students with the tools and hands-on experience of analyzing datasets guided by research questions. Students will learn how to conduct a research project from conceptualization to dissemination, including: development of research questions and analytic plans; cleaning and coding data; assessing the degree of missingness; evaluating and interpreting univariate, bivariate, and multivariate analyses and building models; analyzing and conceptualizing interaction; analyzing complex survey data; and appropriate research dissemination techniques.

Prerequisites: [PHM 2612 or PHM 2610] and [PHM 1690 or PH 1700]

CURRENT: page 61

1. *PHD 2990 course title and description updated and increased to 2 semester credit hours from 1 semester credit hour*
2. *PHWM 2996 prerequisites updated*

PHD 2990 *Epidemiology Seminar*

1 credit

The Epidemiology Seminar is open to all students, but is mandatory for epidemiology doctoral students who have not yet taken their preliminary examination. The seminar is intended to hone research and presentation skills, and to provide students an opportunity to present data, a research proposal, or an epidemiology-related topic to an audience of their peers and mentors. The seminar will provide students an opportunity to receive critical feedback on their research and develop professional interactions between faculty and other students.

PHWM 2996 *Capstone for EPID Students*

3 credits

This integrative learning experience is designed to demonstrate synthesis of major themes from the MPH core and major-specific courses. Students produce at least one high-quality written product.

CHANGE TO:

PHD 2990 Epidemiology Seminar and Journal Club

2 credits

The Epidemiology Seminar and Journal Club is open to all students, but is mandatory for epidemiology doctoral students who have not yet taken their preliminary examination. The seminar is intended to hone research and presentation skills, and to provide students an opportunity to present data, a research proposal, or an epidemiology-related topic to an audience of their peers and mentors. The seminar will provide students an opportunity to receive critical feedback on their research and develop professional interactions between faculty and other students.

PHWM 2996 Capstone for EPID Students

3 credits

This integrative learning experience is designed to demonstrate synthesis of major themes from the MPH core and major-specific courses. Students produce at least one high-quality written product.

Prerequisites: Completed the MPH core courses; completed PH 2615 Epidemiology II; completed at least 30 semester credit hours the semester before enrolling in capstone; and completed or concurrent enrollment in PH 9997 Practicum.

CURRENT: page 63

1. *Masters minor in EOHS requirements updated*
2. *PHWD 2108 course title updated*

Minor in Environmental Sciences EOHS also offers a minor course of study (minimum nine (9) semester credit hours) for MS, doctoral students majoring in other public health disciplines. The prerequisite science background for these courses is required to take the minor course of study in EOHS.

- Masters students: PHWM 2100 Foundations of Environmental and Occupational Health Sciences & two EOHS electives (PHM 2130 & PH 2175 are recommended)
- Doctoral students: PHD 2135 Risk Analysis: Principles and Practice & PHWD 2106 Introduction to Doctoral Research Methods in Environmental and Occupational Health Sciences, OR PHWD 2108 Applied Epidemiological Analyses in Environmental and Occupational Health Sciences, OR PHWD 2760 Occupational Epidemiology; & an EOHS elective

CHANGE TO:

EOHS also offers a minor course of study in environmental sciences (minimum nine (9) semester credit hours) for MS and doctoral students majoring in other public health disciplines.

- Masters students: PHWM 2110 Public Health Ecology & the Human Environment & two EOHS electives (2100 – 2499) (PH 2175 is recommended.)
- Doctoral students: PHD 2135 Risk Analysis: Principles and Practice & PHWD 2106 Introduction to Doctoral Research Methods in Environmental and Occupational Health Sciences, OR PHWD 2108 Applied Epidemiological Analysis, OR PHWD 2760 Occupational Epidemiology; & an EOHS elective (2100 – 2499)

CURRENT: page 64

1. *Public Health 101 requirement added*
2. *Major course requirements updated*
3. *ILE options updated*

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Environmental Health:

- MPH Core: **PHM 1690, PHM 2612, PHM 3715, PHM 1110, PHWM 2110 & PHM 5015**
- Major Courses: **PH 2175 Toxicology I: Principles of Toxicology; PH 2205 Health and Safety Program Management and Leadership; Two of: PH 2135 Risk Analysis: Principles and Practice, PH 2150 Air Environment, PH 2230 Water Environment, PH 2245 Fundamentals of Industrial Hygiene**
- Elective courses in EOHS
- Applied Practice Experience: **PH 9997 Practicum**
- Integrative Learning Experience: **PHM 2496 Capstone for EOHS Students OR PHM 9998 Thesis Research**

CHANGE TO:

Course of Study

The following program courses are required for an MPH student majoring in Environmental Health:

- Other Required Course: **PH 101 Foundations in Public Health** (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH)
- MPH Core Courses: **PHM 1110, PHM 1690, PHWM 2110, PHM 2612, PHM 3715, & PH 5015**
- Major Courses: **PH 2175 Toxicology I: Principles of Toxicology & PH 2205 Health and Safety Program Management and Leadership & PH 2135 Risk Analysis: Principles and Practice & One of the courses from the selections below:**
 - **PH 2150 Air Environment**
 - **PH 2230 Water Environment**
 - **PH 2245 Fundamentals of Industrial Hygiene**
- Electives: Students should consult with their advisor when selecting elective courses. Students are required to complete at least three (3) credit hours of the nine (9) credit hours of EOHS coursework (2000-2499).
- Applied Practice Experience: **PH 9997 Practicum**
- Integrative Learning Experience: **PHWM 2496 Capstone for EOHS Students or PHM 9998 Culminating Experience/Thesis Research (for students completing an independent ILE or traditional academic thesis)**

CURRENT: page 64

1. Degree major name updated
2. Public Health 101 requirement added
3. PHD 2105 – requirement updated
4. PHD 2106 corrected
5. Track-specific course prefixes and number updated
6. Minor and breadth requirements listed

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for a PhD student majoring in Epidemiology, Environmental Disease Prevention Track:

- Leveling Courses: **PH 1700 Intermediate Biostatistics; PHM 2110 Public Health Ecology and the Human Environment; PH 2175 Toxicology I: Principles of Toxicology; PHM 2612 Epidemiology I**
*PHM leveling courses do not count toward the credit-hour minimum for the degree.
- Major Courses: **PHD 2105 EOHS Doctoral Seminar & PHWM 2106 Introduction to Doctoral Research Methods in EOHS & PH 2245 Fundamentals of Industrial Hygiene**
- Track-Specific Courses: **PHD 2135 Risk Analysis - Principles and Practice & PHD 2177 Toxicology II: Toxic Agents and the Environment & PHD 2126 Fundamentals and Applications of GIS & PH 2155 Environmental Sampling and Analysis & PHD 2150 Air Environment OR PHD 2130 Water Environment**
- Minor: Epidemiology Minor
- Breadth: Person-Centered Well-Being Breadth
- **PHD 9999 Dissertation Research**

CHANGE TO:

Course of Study

The following program courses are required for a PhD student majoring in Environmental Science, Environmental Disease Prevention Track:

- Leveling and Other Required Courses: **PH 101** *Foundations in Public Health* (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH), **PHM 1700** *Intermediate Biostatistics*; **PHWM 2110** *Public Health Ecology and the Human Environment*; **PH 2175** *Toxicology I: Principles of Toxicology*; **PHM 2612** *Epidemiology I* (academic credits from leveling courses do not count towards the total required number of credits for the degree program)
- Major Courses: **PHD 2105** *EOHS Doctoral Seminar* (taken twice) & **PHD 2106** *Introduction to Doctoral Research Methods in EOHS* & **PH 2245** *Fundamentals of Industrial Hygiene*
- Track-Specific Courses: **PHD 2135** *Risk Analysis - Principles and Practice* & **PHD 2177** *Toxicology II: Toxic Agents and the Environment* & **PHD 2126** *Fundamentals and Applications of GIS* & **PHD 2155** *Environmental Sampling and Analysis* & One of the courses from the selections below:
 - **PHW 2150** *Air Environment*
 - **PHWD 2230** *Water Environment*
- Minor: Epidemiology Minor: **PH 2615** *Epidemiology II* & **PH 2710** *Epidemiology III* & One of the courses from the selections below:
 - **PHWD 2108** *Applied Epidemiological Analysis*
 - **PHWD 2760** *Occupational Epidemiology*
 - **PHD 2762** *Environmental Epidemiology*
- Breadth: Person-Centered Well-Being Breadth: **PHD 2845** *Nutritional Epidemiology* & One course from each of the groupings selections below (12 credit hours):
 - Selection 1: 3 credit hours of selected required course
 - **PH 2735** *Physical Activity and Health: Epidemiology and Mechanisms*
 - **PH 5400** *Physical Activity Assessment and Surveillance*
 - **PH 5401** *Physical Activity and Public Health Practice*
 - Selection 2: 3 credit hours of selected required course
 - **PHW 2780** *Applied Genetics Methods in Public Health*
 - **PH 2815** *Genetics and Human Disease*
 - **PHW 2970** *Foundations of Public Health Genetics*
 - Selection 3: 3 credit hours of selected required coursework
 - **PH 1350** *Ethnicity, Race, Class & Gender: A Multicultural Public Health Perspective*
 - **PHW 2775** *Epidemiologic Methods in Racial and Ethnic Disparities*
 - **PHD 3922** *Economic and Social Determinants of Health*
- **PHD 9999** *Dissertation Research*

CURRENT: page 65

1. Degree major name corrected
2. Public Health 101 requirement added
3. PHD 2105 – requirement updated
4. PHD 2106 corrected
5. Track-specific course requirements updated
6. Minor and breadth requirements listed

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for a PhD student majoring in Epidemiology, Total Worker Health Track:

- Leveling Courses: **PH 1700** *Intermediate Biostatistics*; **PHM 2110** *Public Health Ecology and the Human Environment*; **PH 2175** *Toxicology I: Principles of Toxicology*; **PHM 2612** *Epidemiology I*
*PHM leveling courses do not count toward the credit-hour minimum for the degree.
- Major Courses: **PHD 2105** *EOHS Doctoral Seminar* & **PHWM 2106** *Introduction to Doctoral Research Methods in EOHS* & **PH 2245** *Fundamentals of Industrial Hygiene*
- Track-Specific Courses: **PH 2205** *Health and Safety Program Management and Leadership* & **PH 2246** *Principles of Occupational Ergonomics* & **PH 2241** *Fundamentals of Occupational Safety* & **PWHD 2760** *Occupational Epidemiology*
- Minor: Health Promotion and Behavioral Sciences Minor
- Breadth: Worker-Centered Well-Being Breadth
- **PHD 9999** *Dissertation Research*

CHANGE TO:

Course of Study

The following program courses are required for a PhD student majoring in Environmental Science, Total Worker Health Track:

- Leveling and Other Required Courses: **PH 101** *Foundations in Public Health* (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH), **PHM 1110** *Health Promotion & Behavioral Sciences in Public Health*; **PHM 1700** *Intermediate Biostatistics*; **PHM 2110** *Public Health Ecology and the Human Environment*; **PH 2175** *Toxicology I: Principles of Toxicology*; **PHM 2612** *Epidemiology I* (academic credits from leveling courses do not count towards the total required number of credits for the degree program)
- Major Courses: **PHD 2105** *EOHS Doctoral Seminar* (taken twice) & **PHD 2106** *Introduction to Doctoral Research Methods in EOHS* & **PH 2245** *Fundamentals of Industrial Hygiene*
- Track-Specific Courses: **PH 2205** *Health and Safety Program Management and Leadership* & **PH 2241** *Fundamentals of Occupational Safety* & **PH 2270** *Total Worker Health and Worker Well-being* & **PH 2498 ST: Occupational Health Psychology** & **PH 2498 ST: Total Worker Health Field Experience** & **PHWD 2760** *Occupational Epidemiology*
- Minor: Health Promotion and Behavioral Sciences Minor: **PHD 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs* & **PHD 1120** *Program Evaluation* & **PHD 1122** *Health Promotion Theory for Individuals and Groups*
- Breadth: Worker-Centered Well-Being Breadth: Four courses (12 credit hours) from the selections below:
 - **PH 1236** *Issues in Aging*
 - **PH 1410** *Addiction and Society*
 - **PH 1424** *Ethnicity, Race, Class & Gender: A Multicultural Public Health Perspective*
 - **PH 2246** *Principles of Occupational Ergonomics*
 - **PH 2835** *Injury Epidemiology*
 - **PHD 2845** *Nutritional Epidemiology*
 - **PHD 2762** *Environmental Epidemiology*
 - **PHD 3810** *Health Policy in the U.S.*
 - **PHM 3910** *Health Economics*
 - **PH 3737** *Cost-effectiveness for Public Health Interventions*
 - **PH 5220** *Gender and Leadership*
 - Students may take one of the following courses as part of the breadth requirement:
 - **PH 5400** *Physical Activity Assessment and Surveillance*
 - **PHD 5402** *Social & Behavioral Aspects of Physical Activity*
 - **PH 2735** *Physical Activity & Health: Epidemiology & Mechanics*

• **PHD 9999 Dissertation Research**

CURRENT: page 65

1. *PHWM 2100 removed*
2. *PHM and PHD 2101 removed*

PHWM 2100 *Foundations of Environmental and Occupational Health Sciences*

4 credits

This one-semester course covers basic concepts in the field as groundwork up on which the remainder of the EOHS curriculum is built. This course is part of the common core courses required of all MPH majors in the EOHS program. In addition, doctoral students selecting a minor in EOHS will typically complete this course, together with PHM 2130 Recognition of Environmental and Occupational Hazards, in partial fulfillment of their coursework requirements.

Prerequisites: Must be a master's student majoring in the EOHS program, or a doctoral student from other departments or programs with a minor in EOHS; or equivalent undergraduate preparation as that of an EOHS major. Exceptions with consent of instructor.

PHM 2101 *Contemporary Issues in Environmental and Occupational Health*

2 credits

PHD 2101 *Contemporary Issues in Environmental and Occupational Health*

3 credits

This course surveys significant current issues in the field of EOHS and policy, with the goal of preparing students to critically assess peer-reviewed literature and apply the literature to future professional work in the private sector, the public sector, or academia. Students will learn how to analyze, interpret, and critique articles published in the peer-reviewed literature through lecture, class group discussion, and presentations. This course provides an overview of many of the most important topics at the forefront of the field, including gene-environment interactions, environmental health disparities, sustainability, exposure assessment, translational research, innovative technology and science, occupational health, and clinical medicine. Doctoral students will engage in additional evaluation of their and their peers' research sources and methods.

CHANGE TO: (removed)

CURRENT: page 66

1. *PHWD 2108 course title updated*

PHWD 2108 *Applied Epidemiological Analyses in Environmental and Occupational Health Sciences*

3 credits

CHANGE TO:

PHWD 2108 *Applied Epidemiological Analysis*

3 credits

CURRENT: page 67

1. *PHM 2130 removed*
2. *PH 2155 course prefixes added and description updated*

PHM 2130 *Recognition of Environmental and Occupational Hazards*

2 credits

This course provides an overview of industrial and community sources of major chemical hazards. Principal toxicological effects of and diseases affected by these chemicals are presented. The occurrence as

ambient air, water, soil, and indoor and workplace pollutants is described. Transport to other environmental media, and environmental and biological fate are discussed for some key pollutants.
Prerequisites (or, concurrently): PHM 2100

CHANGE TO:

(PHM 2130 removed)

PHM 2155 *Environmental Sampling and Analysis*
4 credits

PHD 2155 *Environmental Sampling and Analysis*

This course covers the theoretical bases and practical applications of sampling techniques and analytical methods used in the quantitative determination of chemical air and liquid contaminants and ionizing radiation in the workplace and community environments. Emphasis will be on spectroscopic, chromatographic, and other modern direct reading instrumental methods. Laboratory exercises will be included. Students will plan environmental sampling design, develop sampling strategies, analyze physical and chemical pollutants in the environments, interpret and communicate the results, and criticize the data related to environmental studies.

Prerequisites: Undergraduate chemistry and mathematics, or consent of instructor

CURRENT: page 69

1. *Prerequisites updated*

PH 2250 Occupational Health Controls
4 credits

This course presents the principles and practice of controlling workplace and associated hazards, and details CPC, respiratory protection, dilution, and local exhaust ventilation engineering controls: basic design and evaluation of industrial ventilation systems, and noise control.

Prerequisites: PH 2245; or consent of instructor: PHM 2100 or 2110 or 2120, and PHM 2130

CHANGE TO:

PH 2250 Occupational Health Controls
4 credits

This course presents the principles and practice of controlling workplace and associated hazards, and details CPC, respiratory protection, dilution, and local exhaust ventilation engineering controls: basic design and evaluation of industrial ventilation systems, and noise control.

Prerequisites: PHWM 2110 and PH 2245; or consent of instructor

CURRENT: page 70

1. *PH 2270 added*
2. *PHWM 2496 Prerequisites updated*

PHM 2496 *Capstone for EOHS Students*
3 credits

This integrative learning experience is designed to demonstrate synthesis of major themes from the MPH core and major-specific courses. Students produce at least one high-quality written product.

CHANGE TO:

PH 2270 *Total Worker Health and Worker Well-being*
2 credits

Total Worker Health® (TWH) involves the policies, programs and practices integrating protection from work-related safety and health hazards with promotion of injury and illness prevention to enhance worker well-being. The terminology, concepts and conceptual frameworks surrounding the field of TWH and worker well-being are introduced along with resources for planning, implementing and evaluating interventions. Students evaluate the effectiveness of TWH interventions in all size businesses and explore potential modifiers of occupational factors influencing worker well-being.

PHWM 2496 *Capstone for EOHS Students*

3 credits

This integrative learning experience is designed to demonstrate synthesis of major themes from the MPH core and major-specific courses. Students produce at least one high-quality written product.

Prerequisites: Completed the MPH core courses; concurrent enrollment in or completed: PH 2175 & PHM 2135; completed at least 30 semester credit hours the semester before enrolling in capstone; and completed or concurrent enrollment in Practicum, PH 9997.

CURRENT: page 73

1. *Public Health 101 requirement to both course of studies added*
2. *Major course requirements to both course of studies corrected*
3. *DI practicum options updated*
4. *ILE options to both course of studies updated*

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Health Promotion/Health Education:

- MPH Core: **PHM 1690, PHM 2612, PHM 3715, PHM 1110, PHWM 2110 & PHM 5015**
- Major Courses: **PHM 1111** *Health Promotion Theory and Methods* & **PHM 1112** *Community Assessment Methods in Public Health* & **PHM 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)* OR **PHM 1117** *Advanced Methods for Planning and Implementing Health Promotion Programs -Short Course* & **PHM 1120** *Program Evaluation* & **PH 1433** *Research Seminar in Health Promotion and Behavioral Sciences*
- Electives
- Applied Practice Experience: **PH 9997** *Practicum*
- Integrative Learning Experience: **PHM 1496** *Capstone for HPBS Students* or **PHM 9998** *Thesis Research*

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Health Promotion/Health Education, Dietetic Internship Track:

- **MPH Core: PHM 1690, PHM 2612, PHM 3715, PHM 1110, PHWM 2110 & PHM 5015**
- Major Courses: **PHM 1111** *Health Promotion Theory and Methods* & **PHM 1117** *Advanced Methods for Planning and Implementing Health Promotion Programs - Short Course*
- Dietetic Internship Track Courses: **PHM 1232** *Public Health Nutrition Practice* & **PH 2755** *Nutrition Research Methods* & **PH 1231** *Medical Nutrition Therapy* & **PH 5098** (section 800) *Garden for Health* (Course Fee: \$75.00) & **PH 5098** (section 850) *Culinary Medicine* (Course Fee: \$75.00)
- Integrative Learning Experience: **PH 1229** *MNT Simulation & Capstone*
- Applied Practice Experience: **PH 9997** *Practicum*

CHANGE TO:

Course of Study

The following program courses are required for an MPH student majoring in Health Promotion/Health Education:

- Other Required Course: **PH 101** *Foundations in Public Health* (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH)
- MPH Core Courses: **PHM 1110, PHM 1690, PHWM 2110, PHM 2612, PHM 3715, & PH 5015**
- Major Courses: **PHM 1111** *Health Promotion Theory and Methods* & **PHM 1112** *Community Assessment Methods in Public Health* & **PHM 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)* & **PHM 1120** *Program Evaluation* & **PH 1433** *Research Seminar in Health Promotion and Behavioral Sciences*
- Elective Courses
- Applied Practice Experience: **PH 9997** *Practicum*
- Integrative Learning Experience: **PHM 1496** *Capstone for HPBS Students* or **PHM 9998** *Culminating Experience/Thesis Research (for students completing an independent ILE or traditional academic thesis)*

Course of Study

The following program courses are required for an MPH student majoring in Health Promotion/Health Education, Dietetic Internship Track:

- Other Required Course: **PH 101** *Foundations in Public Health* (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH)
- MPH Core Courses: **PHM 1110, PHM 1690, PHWM 2110, PHM 2612, PHM 3715, & PH 5015**
- Major Courses: **PHM 1111** *Health Promotion Theory and Methods* & **PHM 1117** *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping) - Short Course* & **PHM 1229** *Medical Nutrition Therapy Simulation Lab* & **PHM 1231** *Advanced Medical Nutrition Therapy* & **PHM 1232** *Public Health Nutrition Practice* & **PH 2755** *Nutrition Research Methods* & **PH 5098** (section 801) *Garden for Health* (Course Fee: \$75.00) & **PH 5098** (section 850) *Culinary Medicine* (Course Fee: \$75.00)
- Applied Practice Experience: **PH 9997** *Practicum* (first year/spring section 800, summer section 870, & second year/spring section 850)
- Integrative Learning Experience: **PHM 1496** *Capstone for HPBS Students: Seed-to-Plate Prevention Pt. 1* (summer, section 850) & **PHM 1496** *Capstone for HPBS Students: Seed-to-Plate Prevention Pt. 2* (fall, section 800) or **PHM 9998** *Thesis Research (for students completing an independent ILE or traditional academic thesis)*

CURRENT: pages 73-74

1. *DrPH in Health Promotion/Health Education increased to 54 semester credit hours from 48 semester credit hours*
2. *Public Health 101 requirement to both course of studies added*
3. *Major course requirements to DrPH course of study updated*
4. *Epidemiology requirement to DrPH course of study added*
5. *Elective courses in both course of studies deleted*
6. *Breadth in DrPH course of study deleted*
7. *Minor in both course of studies updated*
8. *Breadth in PhD course of study updated*

Doctor of Public Health (DrPH) Degree Program

The DrPH in Health Promotion/Health Education is a minimum of semester credit hours and is designed to develop leaders in health promotion practice. Students are trained to conduct applied research in public health settings. It is primarily designed for those who plan to apply scientific discoveries and use strong analytical skills to assess public health problems. They are also trained to develop, implement, and evaluate theory-based public health interventions in practice settings. An important component of this degree program is the ability to communicate findings to the public and policymakers. Students are required to complete a minimum of 48 semester credit hours of coursework (a maximum of nine (9) combined credit hours of applied practice and dissertation count toward the minimum of 48 semester credit hours); a required DrPH core; and either a breadth or minor area of study outside Health Promotion/Health Education department.

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for a DrPH student majoring in Health Promotion & Health Education:

- Before Preliminary Exam: **PHD 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)* & **PHD 1120** *Program Evaluation* & **PHD 1122** *Health Promotion Theories for Individuals and Groups: Part I* & **PHD 1123** *Community Health Promotion Theory and Practice* & **PHD 1420** *Research Design for Behavioral Sciences* & **PHD 1421** *Quantitative Analysis for Behavioral Sciences* & **PH 1433** *Research Seminar in Health Promotion & Behavioral Sciences*
- After Preliminary Exam: **PHD 1118** *Advanced Qualitative Methods* & **PH 1498 ST: Dissemination and Implementation - Short Course** & **PHD 3950** *Advanced Leadership Studies in Public Health* & **PHD 3998 ST: Community Engagement & CBPR**
- Minor or Breadth
- Electives
- Applied Practice Experience: **PH 9997** *Practicum*
- Dissertation: **PHD 9999** *Dissertation Research*

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for a PhD student majoring in Behavioral Sciences and Health Promotion:

- Before Preliminary Exam: **PHD 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)* & **PHD 1122** *Health Promotion Theories for Individuals and Groups: Part I* & **PHD 1227** *Health Promotion Theories for Individuals and Groups: Part II* & **PHD 1420** *Research Design for Behavioral Sciences* & **PHD 1421** *Quantitative Analysis for Behavioral Sciences* & **PH 1433** *Research Seminar in Health Promotion & Behavioral Sciences* & **PHM 2612** *Epidemiology I*
- After Preliminary Exam: **PHD 1118** *Advanced Qualitative Methods* & **PHD 1435** *HPBS Doctoral/Post-Doctoral Research Seminar* & **PH 1498 ST: Proposal Writing for Behavioral Sciences and Health Promotion**
- One breadth and one minor
- Electives
- Dissertation: **PHD 9999** *Dissertation Research*

CHANGE TO:

Doctor of Public Health (DrPH) Degree Program

The DrPH in Health Promotion/Health Education is a minimum of 54 semester credit hours and is designed to develop leaders in health promotion practice. Students are trained to conduct applied research in public health settings. It is primarily designed for those who plan to apply scientific discoveries and use strong analytical skills to assess public health problems. They are also trained to develop, implement, and evaluate theory-based public health interventions in practice settings. An important component of this degree program is the ability to communicate findings to the public and policymakers. Students are required to complete a minimum of 54 semester credit hours of coursework (a maximum of nine (9) combined credit hours of applied practice and dissertation count toward the minimum of 54 semester credit hours); a required DrPH core; and a minor area of study outside Health Promotion/Health Education department.

Course of Study

The following program courses are required for a DrPH student majoring in Health Promotion & Health Education:

- Leveling and Other Required Courses: **PH 101** *Foundations in Public Health* (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH), **PHM 1110** *Health Promotion and Behavioral Sciences in Public Health*; **PHM 1690** *Introduction to Biostatistics in Public Health*; **PHM 2612** *Epidemiology I* (academic credits from leveling courses do not count towards the total required number of credits for the degree program)
- Before Preliminary Exam: **PHD 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)* & **PHD 1120** *Program Evaluation* & **PHD 1122** *Health Promotion Theories for Individuals and Groups: Part I* & **PHD 1123** *Community Health Promotion Theory and Practice* & **PHD 1420** *Research Design for Behavioral Sciences* & **PHD 1421** *Quantitative Analysis for Behavioral Sciences* & **PH 1433** *Research Seminar in Health Promotion & Behavioral Sciences*
- After Preliminary Exam: **PHD 1118** *Qualitative Methods* & **PHD 1121** *Advanced Quantitative Analysis for Behavioral Sciences* & **PH 1498 ST: Dissemination and Implementation - Short Course** & **PHD 1498 ST: Principles of Adult and Community Education for Public Health Educators** & **PHD 3950** *Advanced Leadership Studies in Public Health* & **PHD 3801** *Community-Based Grant Writing Workshop* & **PHD 3998 ST: Community Engagement & CBPR** & **PH 3998 ST: Public Health Advocacy**
- Epidemiology Requirement - All students are required to complete an Epidemiology course during their course of study. Please read carefully the following scenarios:
 - If a student took Epidemiology I at UTHealth School of Public Health as a master's (MPH or MS) student, the required epidemiology course is NOT needed, and the student may apply these credits towards electives or dissertation hours. Note that only six (6) credit hours of dissertation research can be counted toward the total required credits of the degree program.
 - If a student HAS taken Epidemiology I, but it was taken at another institution, the student MUST take another epidemiology course at UTHealth School of Public Health to meet the School's epidemiology requirement (2600-2999). The student may elect to complete the epidemiology requirement as part of an epidemiology minor.
 - If a student has NOT taken Epidemiology I at a prior institution, the student must take Epidemiology I as a leveling course. The required epidemiology course requirement will then be waived, and the student may apply these credits towards electives or dissertation hours. Note that only six (6) dissertation hours can be counted toward the degree planner.
- Minor – Students are required to complete a minor outside of their department. A minor in Epidemiology is strongly encouraged.
- Applied Practice Experience: **PH 9997** *Practicum*
- Dissertation: **PHD 9999** *Dissertation Research*

Course of Study

The following program courses are required for a PhD student majoring in Behavioral Sciences and Health Promotion:

- Other Required Course: **PH 101** *Foundations in Public Health* (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH)
- Before Preliminary Exam: **PHD 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)* & **PHD 1122** *Health Promotion Theories for Individuals and Groups: Part I* & **PHD 1127** *Health Promotion Theories for Individuals and Groups: Part II* & **PHD 1420** *Research Design for Behavioral Sciences* & **PHD 1421** *Quantitative Analysis for Behavioral Sciences* & **PH 1433** *Research Seminar in Health Promotion and Behavioral Sciences* & **PHM 2612** *Epidemiology I*

- After Preliminary Exam: **PHD 1118 Qualitative Methods & PHD 1498 ST: Proposal Writing for Behavioral Sciences and Health Promotion & PHD 1435 HPBS Doctoral/Post-Doctoral Research Seminar**
- Minor – Students are required to complete a minor outside of their department.
- Public Health Methods Breadth: **PHD 1130 Applied Measurement Theory** and six (6) credit hours of additional methods coursework from the selected list:
 - **PH 1119 Qualitative Analysis**
 - **PHD 1121 Advanced Quantitative Analysis for Behavioral Sciences**
 - **PHD 1132 Latent Variable Models and Factor Analysis**
 - **PH 1321 Social Networks and Health**
 - **PH 1324 Applied Discrete Data Analysis using STATA**
- Dissertation: **PHD 9999 Dissertation Research**

CURRENT: page 77

1. *PHD 1121 course title updated and reduced to 3 semester credit hours from 4 semester credit hours*

PHD 1121 Advanced Methods in Program Evaluation

4 credits

CHANGE TO:

PHD 1121 Advanced Quantitative Analysis for Behavioral Sciences

3 credits

CURRENT: page 79

1. *PHM 1231 course title corrected*
2. *PH 1233 added*
3. *PHM 1234 course removed*

PHM 1231 Advances in Medical Nutrition Therapy

4 credits

PHM 1234 Advances in Specialty Nutrition Practice

2 credits

This advanced course is required for Dietetic Internship students. It exposes students to selected areas of specialty dietetics practice, including lectures from practicing dietetic specialists and culinary medicine – community training. Information for professional dietetic practice will also be covered, including Review for the Registration Examination for Dietitians, Licensure Acts, and preparation of a Professional Development Portfolio.

Prerequisites: Currently enrolled in Dietetic Internship Program and concurrently enrolled in Public Health Practicum: Dietetic Internship Supervised Practice Rotation.

CHANGE TO:

PHM 1231 Advanced Medical Nutrition Therapy

4 credits

PH 1233 Introduction to Public Health Nutrition

3 credits

This course is an overview of the predominant food and nutrition issues that affect the public health of developed countries, specifically the United States. Topics include national nutrition guidelines, dietary assessment, specific dietary issues among populations, food safety and current topics in public health nutrition. Dietary issues will be

presented using a life cycle approach, in which the issues are introduced and developed within the framework of a specific age category.

PHM 1234 *Advances in Specialty Nutrition Practice* (removed)

CURRENT: page 80

1. *PHM 1496 Capstone for HPBS Students prerequisites updated*
2. *PHM 1496 Seed to Plate course added*

PHM 1496 *Capstone for HPBS Students*

3 credits

This integrative learning experience is designed to demonstrate synthesis of major themes from the MPH core and major-specific courses. Students produce at least one high-quality written product.

CHANGE TO:

PHM 1496 *Capstone for HPBS Students*

3 credits

This integrative learning experience is designed to demonstrate synthesis of major themes from the MPH core and major-specific courses. Students produce at least one high-quality written product.

Prerequisites: Completed the MPH core courses; completed: PHM 1111L & PHM 1112L & [PHM 1113L or PHM 1120L]; completed at least 30 semester credit hours the semester before enrolling in capstone; and completed or concurrent enrollment in Practicum, PH 9997.

PHM 1496 *Capstone for HPBS Students ST: Seed-To-Plate Prevention, Pt 1 (section 850) or Pt 2 (section 800)*

2, 1 credits

This integrative learning experience is designed to demonstrate synthesis of major themes from the MPH core and major-specific courses. Students produce at least one high-quality written product.

Prerequisites: Must be a dietetic intern; completed the MPH core courses; completed at least 30 semester credit hours the semester before enrolling in capstone; and completed or concurrent enrollment in Practicum, PH 9997.

CURRENT: page 86

1. *Public Health 101 requirement added*
2. *Major courses requirements corrected*
3. *ILE options updated*

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Community Health Practice:

- MPH Core: **PHM 1690, PHM 2612, PHM 3715, PHM 1110, PHWM 2110 & PHM 5015**
- Major Courses: **PHM 3620** *Principles and Practice of Public Health* & **PHM 3630** *Health Program Planning, Implementation, and Evaluation* & **PH 3800** *Working with Diverse Communities* & **PHM 3922** *Economics and Social Determinants of Health* & **PH 3998 ST: Community Assessment Concepts, Methods and Techniques**
- Electives
- Applied Practice Experience: **PH 9997** *Practicum*
- Integrative Learning Experience: **PHM 3996** *Capstone for MPCH Students* or **PHM 9998** *Thesis Research*

CHANGE TO:

Course of Study

The following program courses are required for an MPH student majoring in Community Health Practice:

- Other Required Course: **PH 101 Foundations in Public Health** (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH)
- MPH Core Courses: **PHM 1110, PHM 1690, PHWM 2110, PHM 2612, PHM 3715, & PH 5015**
- Major Courses: **PHM 1112 Community Assessment Methods in Public Health & PHM 3620 Principles and Practice of Public Health & PHM 3630 Health Program Planning, Implementation, and Evaluation & PHM 3800 Working with Diverse Communities & PHM 3922 Economics and Social Determinants of Health**
- Elective Courses
- Applied Practice Experience: **PH 9997 Practicum**
- Integrative Learning Experience: **PHM 3996 Capstone for MPACH Students or PHM 9998 Culminating Experience/Thesis Research (for students completing an independent ILE or traditional academic thesis)**

CURRENT: page 87

1. *Public Health 101 requirement to both course of studies added*
2. *Major course requirements to both course of studies corrected*
3. *Electives requirements on both course of studies deleted*
4. *ILE options on both course of studies updated*

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Health Services Organizations:

- MPH Core: **PHM 1690, PHM 2612, PHM 3715, PHM 1110, PHWM 2110 & PHM 5015**
- Major Courses: **PHM 3910 Health Economics & PH 3915 Methods for Economics Evaluation of Health Programs & PH 3920 Health Services Delivery and Performance & PH 3940 Healthcare Outcomes and Quality Research OR PHM 3746 Evaluation and Improvement of Healthcare Quality OR PH 3998 ST: Quality, Cost and Value Evaluation in Healthcare & PH 3815 Health Policy Analysis OR PHD 3930 Econometrics & PHM 3810 Health Policy in the United States OR PH 3818 Texas Health Policy**
- Electives
- Applied Practice Experience: **PH 9997 Practicum**
- Integrative Learning Experience: **PHM 3996 Capstone for MPCH Students or PHM 9998 Thesis Research**

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Healthcare Management:

- MPH Core: **PHM 1690, PHM 2612, PHM 3715, PHM 1110, PHWM 2110 & PHM 5015**
- Major Courses: **PHM 3744 Organizational Behavior and Human Resource Management in Health Services Organizations OR PHD 3743 Organizational and Management Theory & PHM 3746 Evaluation and Improvement of Healthcare Quality OR PH 3845 Quality, Cost and Value Evaluation in Healthcare & PHM 3718 Accounting for Healthcare Management & PHM 3720 Healthcare Finance & PH 3735 Healthcare Strategic Management & PH 3736 U.S. Healthcare Payment Systems and Policy & PH 3738 Legal Issues in Healthcare & PH 3747 Healthcare Operations Management**
- Electives
- Applied Practice Experience: **PH 9997 Practicum**
- Integrative Learning Experience: **PHM 3996 Capstone for MPCH Students or PHM 9998 Thesis Research**

CHANGE TO:

Course of Study

The following program courses are required for an MPH student majoring in Health Services Organizations:

- Other Required Course: **PH 101 Foundations in Public Health** (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH)

- MPH Core Courses: **PHM 1110, PHM 1690, PHWM 2110, PHM 2612, PHM 3715, & PH 5015**
- Major Courses: **PH 3920 Health Services Delivery and Performance & PHM 3910 Health Economics & PH 3915 Methods for Economics Evaluation of Health Programs & One course from each of the following groupings:**
 - Three (3) credit hours of a selected required course: **PH 3845 Quality, Cost and Value Evaluation in Healthcare OR PHM 3746 Evaluation and Improvement of Healthcare Quality OR PH 3940 Healthcare Outcomes and Quality Research**
 - Three (3) credit hours of a selected required course: **PH 3815 Health Policy Analysis OR PHD 3930 Econometrics**
 - Three credit hours of a selected required course: **PHM 3810 Health Policy in the United States OR PH 3818 Texas Health Policy**
 - Three (3) to four (4) credit hours of a selected required course: **PHM 3718 Accounting for Healthcare Management AND PHM 3720 Healthcare Finance** (these should be both taken if selected) OR **PH 3815 Health Policy Analysis OR PHD 3930 Econometrics OR PHD 3931 Advanced Econometrics OR PH 3736 Healthcare Payment Systems & Policy OR PH 3738 Legal Issues in Healthcare**
- Applied Practice Experience: **PH 9997 Practicum**
- Integrative Learning Experience: **PHM 3996 Capstone for MPACH Students or PHM 9998 Culminating Experience/Thesis Research (for students completing an independent ILE or traditional academic thesis)**

Course of Study

The following program courses are required for an MPH student majoring in Healthcare Management:

- Other Required Course: **PH 101 Foundations in Public Health** (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH)
- MPH Core Courses: **PHM 1110, PHM 1690, PHWM 2110, PHM 2612, PHM 3715, & PH 5015**
- Major Courses: **PHM 3718 Accounting for Healthcare Management & PHM 3720 Healthcare Finance & PH 3735 Healthcare Strategic Management & PH 3736 Healthcare Payment Systems and Policy & PH 3738 Legal Issues in Healthcare & PHM 3744 Organizational Behavior and Human Resource Management in Health Services Organizations & PHM 3746 Evaluation and Improvement of Healthcare Quality & PH 3747 Healthcare Operations Management**
- Applied Practice Experience: **PH 9997 Practicum**
- Integrative Learning Experience: **PHM 3996 Capstone for MPACH Students or PHM 9998 Culminating Experience/Thesis Research (for students completing an independent ILE or traditional academic thesis)**

CURRENT: page 88

1. *DrPH in Community Health Practice increased to 54 semester credit hours from 48 semester credit hours*
2. *Public Health 101 requirement to both course of studies added*
3. *Coursework curriculum to DrPH course of study updated*
4. *Breadth in DrPH course of study deleted*

Doctor of Public Health (DrPH) Degree Program

The DrPH in Community Health Practice is a minimum of 48 semester credit hours and offers interdisciplinary training for students who want to practice at an advanced level or pursue academic careers in community health practice.

Course of Study

The following courses are required, except in the case of a waiver (the waiver process varies by program), for a DrPH student majoring in Community Health Practice:

- Before Preliminary Exam: **PHD 1113 Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping) & PHD 1120 Program Evaluation & PH 2615 Epidemiology II & PH 3998**

ST: Practice-Based Methods and Design & PH 3998 ST: Community-Based Grant Writing Workshop & PHD 3998 ST: Community Engagement & CBPR

- Major Courses: **PH 1700** Intermediate Biostatistics & **PHD 3620** Principles and Practice of Public Health & **PHD 3800** Working with Diverse Communities (Social Justice) & **PHD 3830** Ethics and Policy & **PHD 3950** Advanced Leadership Studies in Public Health & **PH 3998 ST: Advocacy for Public Health**
- One breadth and one minor or two minors
- Applied Practice Experience: **PH 9997** Practicum
- Dissertation: **PHD 9999** Dissertation Research

CHANGE TO:

Doctor of Public Health (DrPH) Degree Program

The DrPH in Community Health Practice is a minimum of 54 semester credit hours and offers interdisciplinary training for students who want to practice at an advanced level or pursue academic careers in community health practice.

Course of Study

The following courses are required for a DrPH student majoring in Community Health Practice:

- Leveling and Other Required Courses: **PH 101** Foundations in Public Health (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH), **PHM 1690** Introduction to Biostatistics in Public Health, **PHM 1110** Health Promotion and Behavioral Sciences in Public Health, **PHM 2612** Epidemiology I, **PHM 3715** Management and Policy Concepts in Public Health (academic credits from leveling courses do not count towards the total required number of credits for the degree program)
- Before Preliminary Exam: **PHD 3620** Principles and Practice of Public Health & **PHD 3998 ST: Working with Diverse Communities** & **PHD 3801** Community-based Grant Writing Workshop & **PHD 3998 ST: Community Engagement & CBPR** & **PH 2615** Epidemiology II & **PH 3998 ST: Practice-based Methods and Design** & **PHD 1120** Program Evaluation
- Major Courses: **PHD 3950** Advanced Leadership Studies in Public Health & **PHD 3830** Ethics and Policy & **PHD 1118** Qualitative Methods & **PH 1700** Intermediate Biostatistics & **PHD 1498 ST: Principles of Adult and Community Education for Public Health** & **PH 3998 ST: Public Health Advocacy** & One course from the selected list: **PHD 3918** Geographic Information Systems Science OR **PHD 3926** Health Survey Research Design OR **PH 3738** Legal Issues in Healthcare
- Minor – Students are required to complete a minor outside of their department.
- Applied Practice Experience: **PH 9997** Practicum
- Dissertation: **PHD 9999** Dissertation Research

CURRENT: page 89

1. Public Health 101 requirement to both course of studies added
2. Major course requirements to both course of studies updated
3. Track/emphasis requirements to both course of studies updated

Health Economics/Health Services Research

Course of Study

The following Departmental courses are required, except in the case of a waiver (the waiver process varies by program), for PhD students majoring in Health Economics/Health Services Research:

- Before Preliminary Exam: **PHD 3910** Health Economics & **PH 3915** Methods for Economic Evaluation of Health Programs & **PH 3920** Health Services Delivery and Performance & **PHD 3926** Health Survey Research Design & **PHD 3930** Econometrics in Public Health & **PH 3940** Healthcare Outcomes and Quality Research
- Select a Track:
 - Health Economics Track: **PHD 3935** Advanced Health Economics

- Health Services Research Track: **PHD 3945** *Advanced Health Services Research Methods*
- Additional Required Courses for Either Track: **PHD 3935** *Advanced Health Economics* OR **PHD 3931** *Advanced Econometrics* OR **PH 3957** *Topics in Health Economics* OR **PH 3812** *Comparative Healthcare Systems & Policy* OR **PH 3998 ST**: *Claims Data in Health Services Research* OR **PHD 3922** *Economic and Social Determinants of Health* OR **PHD 3970** *Proposal Development MPCH*
- Required Course: **PHM 2612** *Epidemiology I* OR **PHD 3620** *Principles and Practice of Public Health*
- One breadth and one minor or two minors
- Dissertation: **PHD 9999** *Dissertation Research*

Healthcare Management

Course of Study

The following departmental courses are required, except in the case of a waiver (waiver process varies by program), for PhD students majoring in Healthcare Management:

- Leveling Course: **PH 1700** *Intermediate Biostatistics*
- Before Preliminary Exam: **PHD 3743** *Organizational and Management Theory* & **PH 3815** *Health Policy Analysis* & **PHD 3731** *Healthcare Management and Policy Research* & **PHD 3846** *Quality Management and Improvement in Healthcare* & **PHD 3721** *Healthcare Finance* & **PHD 3810** *Health Policy in the United States*
- Select an Emphasis:
 - Healthcare Management Emphasis (select 2): **PHD 3946** *Doctoral Strategy, Governance, and Leadership* OR **PHD 3940** *Healthcare Outcomes and Quality Research* OR **PHD 3910** *Health Economics* OR **PH 3738** *Legal Issues in Healthcare* OR **PH 3747** *Healthcare Operations Management* **PHD 3812** *Comparative Healthcare Systems and Policy* OR **PHD 3922** *Economic & Social Determinants of Health* OR **PH 3736** *Healthcare Payment Systems and Policy*
 - Health Policy Emphasis (select 2): **PHD 3830** *Ethics and Policy* OR **PH 3915** *Methods for Economic Evaluation of Health Programs* OR **PH 3738** *Legal Issues in Healthcare* OR **PH 3736** *U.S. Healthcare Payment Systems and Policy* OR **PHD 3812** *Comparative Healthcare Systems and Policy* OR **PH 3818** *Texas Health Policy: Emerging Issues of Health Program*
- Required Course: **PHM 2612** *Epidemiology I* OR **PHD 3620** *Principles and Practice of Public Health*
- One breadth and one minor or two minors
- Dissertation: **PHD 9999** *Dissertation Research*

CHANGE TO:

Health Economics/Health Services Research

Course of Study

The following Departmental courses are required for PhD students majoring in Health Economics/Health Services Research:

- Other Required Course: **PH 101** *Foundations in Public Health* (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH)
- Required Major Courses: **PHD 3910** *Health Economics* & **PH 3915** *Methods for Economic Evaluation of Health Programs* & **PH 3920** *Health Services Delivery and Performance* & **PHD 3926** *Health Survey Research Design* & **PHD 3930** *Econometrics in Public Health* & **PH 3940** *Healthcare Outcomes and Quality Research*
- Required Course: **PHM 2612** *Epidemiology I*
- Required Selected Track:
 - Health Economics Track: **PHD 3935** *Advanced Health Economics*
 - Health Services Research Track: **PHD 3945** *Advanced Health Services Research Methods*
 - Three credit hours of Selected Required Coursework for Either Track: **PHD 3935** *Advanced Health Economics* OR **PHD 3931** *Advanced Econometrics* OR **PH 3957** *Topics in Health Economics* OR **PH 3812** *Comparative Healthcare Systems & Policy* OR **PHD 3922** *Economic and Social Determinants*

of Health OR **PHD 3945** *Advanced Health Services Research Methods* OR **PH 3941** *Claims Data in Health Services Research*

- One breadth and one minor OR two minors
 - Students who elect to complete two minors, must complete at least one minor outside of the department of MPACH.
 - Students who elect to complete one minor and one breadth:
 - Students who elect a primary minor within the MPACH department must complete at least two courses of the breadth outside of the department.
 - Students who elect a primary minor outside of the MPACH department may complete breadth coursework in any department.
- Dissertation: **PHD 9999** *Dissertation Research*

Healthcare Management and Health Policy

Course of Study

The following departmental courses are required for PhD students majoring in Healthcare Management or Health Policy:

- Leveling and Other Required Courses: **PH 101** *Foundations in Public Health* (online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by CEPH) & **PH 1700** *Intermediate Biostatistics* (academic credits from leveling courses do not count towards the total required number of credits for the degree program)
- Required Major Courses: **PHD 3721** *Healthcare Finance* & **PHD 3731** *Healthcare Management and Policy Research* & **PHD 3743** *Organizational and Management Theory* & **PHD 3810** *Health Policy in the United States* & **PH 3815** *Health Policy Analysis* & **PHD 3846** *Quality Management and Improvement in Healthcare*
- Required Course: **PHM 2612** *Epidemiology I*
- Select an Emphasis Area:
 - Healthcare Management Emphasis (six credit hours of selected required coursework): **PH 3736** *Healthcare Payment Systems and Policy* OR **PH 3738** *Legal Issues in Healthcare* OR **PHD 3812** *Comparative Healthcare Systems: Policy Challenges and Economic Perspectives* OR **PHD 3910** *Health Economics* OR **PHD 3922** *Economic & Social Determinants of Health* OR **PHD 3940** *Healthcare Outcomes and Quality Research* OR **PHD 3946** *Strategy, Governance, and Leadership*
 - Health Policy Emphasis (six credit hours of selected required coursework): **PHD 3812** *Comparative Healthcare Systems: Policy Challenges and Economic Perspectives* OR **PH 3818** *Texas Health Policy: Emerging Issues and New Approaches* OR **PHD 3830** *Ethics and Policy* OR **PH 3736** *U.S. Healthcare Payment Systems and Policy* OR **PH 3738** *Legal Issues in Healthcare* OR **PH 3915** *Methods for Economic Evaluation of Health Programs* OR **PH 3998** *ST: Advanced Policy Studies with Topical Content*
- One breadth and one minor OR two minors - Students are encouraged to select methodology courses appropriate for their dissertation topic.
 - Students who elect to complete two minors, must complete at least one minor outside of the department of MPACH.
 - Students who elect to complete one minor and one breadth:
 - Students who elect a primary minor within the MPACH department must complete at least two courses of the breadth outside of the department.
 - Students who elect a primary minor outside of the MPACH department may complete breadth coursework in any department.
- Dissertation: **PHD 9999** *Dissertation Research*

PH 3747 Healthcare Operations Management
3 credits

CHANGE TO:

PH 3747 Healthcare Operations Management
2 credits

CURRENT: page 92

1. *PHD 3801 course added*

CHANGE TO:

PHD 3801 Community-Based Grant Writing Workshop
1 credit

The goal of this introductory-level doctoral course is to provide students with the knowledge and tools necessary to write a community-based grant proposal. This course covers the complete process of grant proposal development: legal and policy background of funding organizations; theory and culture of philanthropy; funder relations; research and identification of an achievable and fundable project; logistical concerns when preparing a proposal; proposal writing; budget development; preparation of a full proposal package for submission; and post award or rejection follow-up with funders. Students gain an understanding of community based organizations and become familiar with tools and resources available to assist them as they seek funds for their projects, institutions, or causes.

CURRENT: page 98

1. *PHM 3996 Prerequisites updated*

PHM 3996 Capstone for MPCH Students
3 credits

This integrative learning experience is designed to demonstrate synthesis of major themes from the MPH core and major-specific courses. Students produce at least one high-quality written product.

CHANGE TO:

PHM 3996 Capstone for MPACH Students
3 credits

This integrative learning experience is designed to demonstrate synthesis of major themes from the MPH core and major-specific courses. Students produce at least one high-quality written product.

Prerequisites: Student must be a MPH MPACH major or customized with advanced public health coursework meeting major-specific competency requirements, completed the MPH core courses; completed at least 30 semester credit hours the semester before enrolling in capstone; and completed or concurrent enrollment in Practicum, PH 9997.

CURRENT: page 100

1. *PH 101 course added*
2. *PH 5020 course removed*
3. *PHM 5096 prerequisites updated*
4. *PH 5098 courses updated*

PH 5020 *Innovative Thinking*

2 credits

This course is designed for both master's and doctoral students who need to expand their thinking ability in terms of research questions and research solutions. The theory behind this class is that creativity and innovation can be taught. Topics include: cognitive biases and normal frames of reasoning; observation to inform thinking; thinking backwards; brainstorming; imagining the impossible as possible, and many other tools to your out-of-the box thinking toolkit. Senior scientists recognized for their creativity will share their wisdom.

PHM 5096 *Capstone for Customized Students*

3 credits

This integrative learning experience is designed to demonstrate synthesis of major themes from the MPH core and major-specific courses. Students produce at least one high-quality written product.

PH 5098 *Special Topics in Interdepartmental Courses: Culinary Medicine (section 850)*

2 credits

Through innovative nutrition curriculum and hands -on training in the culinary arts, the Culinary Medicine course will teach medical, nursing, and dietetic intern students about food: how to cook, what to eat, and how to help their patients improve their diet –and thereby, their health. Course Fee: \$75.00

PH 5098 *Special Topics in Interdepartmental Courses: Garden for Health (section 800)*

2 credits

In the Holistic Garden of the School of Public Health, students will gain knowledge of how to use the garden as a tool to improve health and quality of life. Common fruits, vegetables and herbs that are produced during the warmer and cooler months of the year along with information that pertains to their successful cultivation and their unique roles in our diet and health will be discussed. Course Fee: \$75.00

CHANGE TO:

(PHM 5020 removed)

PH 101 *Foundations in Public Health*

Canvas course, not-for-credit

This course is required for all students enrolled in a degree-seeking program. This course is an online, not-for-credit course that covers the Foundational Knowledge Competencies set forth by the Council on Education for Public Health (CEPH). Students will be added to the course in Canvas during their first semester. Students must complete the course within one year of matriculation.

PHM 5096 *Capstone for Customized Students*

3 credits

This integrative learning experience is designed to demonstrate synthesis of major themes from the MPH core and major-specific courses. Students produce at least one high-quality written product.

Prerequisites: Completed the MPH core courses; completed at least 30 semester credit hours the semester before enrolling in capstone; and completed or concurrent enrollment in Practicum, PH 9997. Other prerequisites vary by campus and course offering.

PH 5098 *Special Topics in Interdepartmental Courses: Culinary Medicine (Fall section 850 and Spring section 851)*

2 credits

Through innovative nutrition curriculum and hands -on training in the culinary arts, the Culinary Medicine course will teach medical, nursing, and dietetic intern students about food: how to cook, what to eat, and how to help their patients improve their diet –and thereby, their health. Course Fee: \$75.00

PH 5098 *Special Topics in Interdepartmental Courses: Garden for Health* (Fall section 800 and Spring section 801)

2 credits

A course on community gardening (organic) in the Holistic Garden at SPH. Students will gain knowledge of how to use the garden as a tool to improve health and quality of life for general and special needs populations. Nutritional and Medicinal values of fresh produce and how best to prepare the produce will be introduced. The course will offer specific information about the common fruits, vegetables and herbs that are produced during the year along with information that pertains to their successful cultivation and their unique roles in our diet and health. Course Fee: \$75.00

The University of Texas School of Public Health at Houston

2018-2020 Catalog



The University of Texas Health Science Center at Houston (UTHealth) is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award certificate, baccalaureate, masters, doctorate and special professional degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or 404-679-4500 for questions about the accreditation of The University of Texas Health Science Center at Houston.

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To the extent provided by applicable law, no person shall be excluded from participation in, denied the benefits of, or be subject to discrimination under any program or activity sponsored or conducted by UTHealth on the basis of race, color, religion, sex, sexual orientation, national origin, age, disability, genetic information, gender identity or expression, veteran status or any other basis prohibited by law.

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WELCOME FROM DEAN ERIC BOERWINKLE, PHD

I am honored to be the Dean of UTHealth School of Public Health. Here, we offer advanced degrees in the diverse field of public health including behavior sciences, genetics, and health care management. Our accomplished graduates are innovative leaders at the forefront of population health programs in universities, the private sector, and government organizations in Texas and across the nation. We are continuously challenging ourselves to broaden our educational mission to meet the growing demands of the workforce, and to expand our repertoire of excellence to lead the ever-changing field of health care.



What is public health?

Public health is a science that aims to keep people and communities healthy by preventing disease and ensuring better health care outcomes. Public health is also a profession. UTHealth School of Public Health is here to improve the health of the people of Texas, the nation and the world — our faculty, students and alumni have been doing so for nearly 50 years.

We are conducting exciting and innovative research to identify new ways to keep people healthy and to reduce their risk of future disease. This includes investigating new ways to get young people to eat healthier; new ways to prevent teen pregnancy through better education; new ways to prevent and treat infectious diseases; and new ways to identify the genes that may make some of us more susceptible to or protected from disease. And finally, in the event that you or a loved one gets sick and needs to go to a hospital, it is the people from UTHealth School of Public Health who are leading the way through research and training to ensure that best practices are being used to achieve the best possible health care outcomes.

What sets us apart from other public health programs?

Texas is a big and diverse state — both ethnically and economically. UTHealth School of Public Health has six campuses that span the entire state: from Houston to El Paso; from Brownsville to Dallas; and with San Antonio and Austin in the center. We can — and we do — touch virtually the entire population of Texas. At each campus, we have strong ties to health care organizations, but our strongest ties are to the local communities. We are working side-by-side with partners in clinics, schools, and in people's homes to prevent or delay the onset of disease and to improve health care outcomes within these communities.

Research is the engine that drives advanced education and modern health care. To achieve this, retention and recruitment of the world's best population scientists are critical. Strong strategic partnerships across The University of Texas System and throughout Texas are also important. We are working to solidify the "third coast" as a leader in advanced biotechnologies, health care, and population sciences.

The Houston Campus of UTHealth School of Public Health is nestled in the heart of the Texas Medical Center — the largest medical center in the world — but, more importantly, it is the best place in the world for biomedical research. The number of renowned institutions, highly-trained individuals, and patient visits is unsurpassed. In addition, there is a strong desire to collaborate among the physicians, scientists, and trainees at each of these institutions. Although the Texas Medical Center has grown stronger through competition, it will continue to do so through cooperation and collaboration.

I am the luckiest person on earth to have the privilege to work with so many passionate, dedicated, and intelligent people. I look forward to working with you to achieve these important and shared goals.

Thank you, and I hope you stay healthy.

Eric Boerwinkle, PhD
Dean, UTHealth School of Public Health

UTHEALTH SCHOOL OF PUBLIC HEALTH, ACADEMIC CALENDARS 2018-2020

<u>Fall Semester 2018</u>	
First Day of Classes	August 27
Last Day of Classes	December 7
Final Exams	December 10 - 14
<u>Spring Semester 2019</u>	
First Day of Classes	January 14
Last Day of Classes	May 3
Final Exams	May 6 – 10
<i>Spring Break</i>	<i>March 18 – 22</i>
<u>Summer Sessions 2019</u>	
<i>12 Weeks</i>	
First Day of Classes	May 20
Last Day of Classes	August 12
Final Exams	August 13 - 14
<i>6 Weeks, Session I</i>	
First Day of Classes	May 20
Last Day of Classes	July 1
Final Exams	July 2
<i>6 Weeks, Session II</i>	
First Day of Classes	July 3
Last Day of Classes	August 12
Final Exams	August 13 – 14

<u>Fall Semester 2019</u>	
First Day of Classes	August 26
Last Day of Classes	December 6
Final Exams	December 9 – 13
<u>Spring Semester 2020</u>	
First Day of Classes	January 6
Last Day of Classes	April 24
Final Exams	April 27 – May 1
<i>Spring Break</i>	<i>March 16 – 20</i>
<u>Summer Sessions 2020</u>	
<i>12 Weeks</i>	
First Day of Classes	May 18
Last Day of Classes	August 7
Final Exams	August 10 – 11
<i>6 Weeks, Session I</i>	
First Day of Classes	May 18
Last Day of Classes	June 26
Final Exams	June 29
<i>6 Weeks, Session II</i>	
First Day of Classes	June 30
Last Day of Classes	August 7
Final Exams	August 10 – 11

Holidays will be announced in the schedule of classes.

Academic calendars are subject to change.

For the complete and most current academic calendar, please go to the Office of the Registrar's website at <https://www.uth.edu/registrar/calendars/academic-calendar-academic.htm>

ADMINISTRATIVE OFFICERS

Eric Boerwinkle, PhD

Dean

Susan Emery, PhD

Senior Associate Dean of Academic and Research Affairs

Mary Ann Smith, PhD

Assistant Dean of Students

Deanna Hoelscher, PhD

Campus Dean
Austin Campus

Joseph B. McCormick, MD

Campus Dean
Brownsville Campus

Bijal Balasubramanian, PhD, MPH, MBBS

Campus Dean
Dallas Campus

Kristina D. Mena, MSPH, PhD

Interim Campus Dean
El Paso Campus

Melissa A. Valerio, PhD, MPH

Campus Dean
San Antonio Campus

Hulin Wu, PhD

Chair
Department of Biostatistics and Data Science

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Chair
Department of Management, Policy and
Community Health

Alanna Morrison, PhD

Chair
Department of Epidemiology, Human Genetics
and Environmental Sciences

Sally W. Vernon, PhD

Chair
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Behavioral Sciences

Debra J. Ryan, MEd

Associate Dean for Management

Krishna Sankhavaram

Executive Director of Information Technology

Nesh Aqrawi

Director of Academic Affairs

Erin Meade

Director of Development

Brian C. Miller, JD

Director of Research Services

Mary Pastore, BS

Director of Accounting Services

John T. (JT) Rayburn

Director of Administrative Services

Janelle Rios, PhD

Director of Public Health Practice

GENERAL INFORMATION

History

The origins of public health can be traced to two roots: the requirement that a community protect itself from the ravages of mass disease, and an altruistic desire to ensure at least a minimal opportunity for a healthy life for underprivileged children. Early practical applications of these roots were the adoption of formal quarantine regulations in the 1300s by the Italian cities of Ragusa and Venice and the child health movements of the late 1800s. Epidemics were an inevitable result of the growth of cities, and urban populations were forced to submit helplessly to the catastrophic epidemics of smallpox, cholera, plague, diphtheria, and other diseases until an explosion of knowledge during the last half of the nineteenth century promised relief. The microbiological era in biomedical research was responsible for the identification of specific microbiological agents of disease and the development of the science of immunology. Precisely designed preventive procedures became available, and, simultaneously, advances in engineering made possible the provision of potable water, the removal of noxious wastes, and the construction of more hygienic dwellings and safer working places.

Community problems and community solutions cannot be managed by individual initiatives, so boards of health and health departments were created to protect the health of their constituents. By around 1910, the number of health departments in the United States, and the increasing complexity of their responsibilities, generated a need for specially trained physicians, nurses, and engineers. Educational programs were developed at Massachusetts Institute of Technology, Harvard University, and Johns Hopkins University, and from these programs evolved the concept of a specialized school providing both professional and academic curricula in community health and related fields.

After World War II, the emphasis in community health changed greatly. Chronic diseases began to displace infections as primary causes of death in developed nations, and public concern was directed toward personal medical care services and environmental health hazards. As the need for a skilled work force continued to grow, new schools of public health were established, enrollments were expanded, and curricula were altered to address the changing circumstances.

In 1947, the Texas State Legislature authorized a school of public health within The University of Texas System, but the authorization was not implemented until 1967. In that year, The University of Texas System, supported by many public-spirited citizens in Houston and elsewhere in Texas, requested and received an appropriation for the school. The first class, admitted in the fall of 1969, occupied rented and borrowed space. Enrollment doubled in the second year and again in the third year. In response to this testimony to the previously unfilled need for graduate public health education in other geographic areas of the state, the school initiated MPH Programs in San Antonio in 1979, in El Paso in 1992, in Dallas in 1998, Brownsville in 2001, and in Austin in 2007. Strong research programs exist at each campus, addressing especially the health problems of Texas. More than half of the School's graduates work in Texas, with the remainder working across the nation and the world.

UTHealth School of Public Health is housed in the Reuel A. Stallones Building and the University Center Tower Building in Houston. Dr. Stallones was the school's founding dean and served from 1967 to 1986. His educational philosophy and his eminence in both epidemiology and graduate public health education were recognized by The University of Texas Board of Regents when they named the main building in his honor.

Mission

The mission of UTHealth School of Public Health is to improve the health of the people of Texas, the nation and the world by providing the highest quality graduate education, translational research, and service to the profession and community.

Accreditation

The University of Texas Health Science Center at Houston (UTHealth) is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award certificate, baccalaureate, master's, doctorate and special professional degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of The University of Texas Health Science Center at Houston.

UTHealth School of Public Health is accredited by the Council on Education for Public Health (CEPH). For further information, please visit the accreditation webpage at <https://sph.uth.edu/about-us/accreditation/>.

The Master of Public Health (MPH) degree program satisfies the academic requirement for certification by the American Board of Preventive Medicine in the areas of public health, occupational medicine, aerospace medicine, and preventive medicine (See "Programs, Centers, and Institutes"); the National Board of Public Health Examiners; and the National Commission for Health Education Credentialing. The MPH in Healthcare Management is accredited by the Commission on Accreditation of Healthcare Management Education (CAHME).

CAMPUSES

UTHealth School of Public Health has six campuses within The University of Texas Health Science Center at Houston (UTHealth) that serve the major population centers and border areas of Texas. The campuses are strategically located in Austin, Brownsville, Dallas, El Paso, Houston and San Antonio, and they provide onsite public health education to local populations. Degree and non-degree programs are designed to enhance the ability of the public health workforce to respond widely to the needs of the population of Texas.

Educational programs are integrated across all campuses, and faculty and students at all campuses regularly interact with each other. Each campus is equipped with state-of-the-art communication systems so that students and faculty are full participants in the same class with those at other sites. The school provides courses and learning experiences at each campus and across campuses through a combination of distance education and in-person modalities, including interactive TV, webcam, and online offerings.

Students are admitted to a specific campus and complete all or most of their educational program at that site. Students are encouraged to engage in research with faculty at any site and may relocate, if warranted.

UTHealth School of Public Health – Austin Campus

Campus Dean: Deanna Hoelscher, PhD

The [Austin Campus](#) was established in March 2007 to offer graduate-level courses leading to the Master of Public Health (MPH) degree. Since then, other degree programs have been approved. The University of Texas at Austin serves as the host institution for the campus. The campus administrative office is currently housed at 1616 Guadalupe Street, Suite 6.300 in the Administration building near campus.

The programs at the Austin Campus include child and adolescent health promotion, obesity prevention with children, tobacco and alcohol use prevention, and community-based policy and programs to support children's health.

UTHealth School of Public Health – Brownsville Campus

Campus Dean: Belinda Reininger, DrPH

The [Brownsville Campus](#) was established in 2001 in the Lower Rio Grande Valley. The campus is less than a mile from the Mexico border and is part of the Regional Academic Health Center (RAHC). The campus is currently housed in a 26,000-square foot building with classrooms, computer research laboratories, offices, and a commons area, located at One West University Boulevard.

The programs at the Brownsville Campus focus on the health problems and their solutions in the U.S.-Mexico border area. Special areas of interest include obesity and diabetes and their interaction with infectious diseases, such as tuberculosis, and with cancer. Students in Brownsville also have an opportunity to gain invaluable experience in international health by participating in numerous bi-national programs with Mexican organizations.

UTHealth School of Public Health – Dallas Campus

Campus Dean: Bijal Balasubramanian, PhD, MPH, MBBS

The [Dallas Campus](#) was established in 1998. The academic programs are carried out in partnership with The University of Texas Southwestern Medical Center at Dallas, and the campus is housed at the UT Southwestern School of Health Professions, at 6011 Harry Hines Boulevard.

The programs at the Dallas Campus emphasize the particular health problems of the large metropolitan area of the Dallas/Fort Worth metroplex, including cancer prevention and control, violence and injury, and children's health.

UTHealth School of Public Health – El Paso Campus

Interim Campus Dean: Kristina D. Mena, MSPH, PhD

The [El Paso Campus](#) was established in 1992, and is located on the University of Texas at El Paso (UTEP) campus, at 1851 Wiggins Way.

The educational and research opportunities at the El Paso Campus address public health issues with international implications, including research studies directly addressing border health. These studies reflect the campus's physical location on the U.S.-Mexico border, and its characteristic and unique multicultural milieu.

UTHealth School of Public Health – Houston Campus

Dean: Eric Boerwinkle, PhD

The main [Houston Campus](#) was established in 1969. It is located in the fourth largest city in the U.S., within the Texas Medical Center (TMC) at 1200 Pressler Street, in the Reuel A. Stallones Building. TMC is a comprehensive medical complex, where multiple health institutions reside, and stands as the leading health care destination for people all over the world.

UTHealth School of Public Health – San Antonio Campus

Campus Dean: Melissa Valerio, PhD, MPH

The [San Antonio Campus](#) was established in 1979, and is located near its host institution, The University of Texas Health Science Center at San Antonio, at 7703 Floyd Curl Drive.

The programs at the San Antonio Campus emphasize community-focused and population-based health research centering on the many public health problems of the San Antonio and South Texas region. These include community health assessment, diabetes, cancer control, health services research, bioterrorism and domestic preparedness, exposure to toxic materials, occupational health, and community information systems.

DEGREE PROGRAMS

UTHealth School of Public Health has a variety of degree and non-degree programs. Degree programs include professional, Master of Public Health (MPH) and Doctor of Public Health (DrPH), and academic, Master of Science (MS) and Doctor of Philosophy (PhD) degrees. Non-degree programs include several graduate certificates, for both degree-seeking and non-degree-seeking students, and educational collaborations with other schools and universities.

A course generally consists of a combination of lectures, discussions, skill-based activities, directed reading, and independent study and inquiry. All courses satisfying the MPH core requirements are letter-graded. Elective courses are letter-graded or graded on a pass/fail basis at the discretion of the instructor. Letter grades in pass/fail courses (i.e. an "F") are not included in the grade point average calculated for letter-graded courses.

Up to nine (9) graduate semester credit hours earned at other accredited institutions may be transferred and applied to UTHealth School of Public Health transcripts or counted toward graduation requirements if approved by the Office of Academic Affairs and Student Services and the student's advisor. These hours must not have been applied toward another awarded degree.

For dual degree programs with reciprocal agreements, students enrolled at UTHealth School of Public Health may take courses for credit at affiliated institutions, provided the courses are prospectively recommended and approved by the student's advisory committee. The sum total number of transfer credit that students can apply to a dual degree program at UTHealth School of Public Health from an accredited foreign institution is 12 semester credit hours. This applies to all concurrent/dual degree programs and external transfer credits. Students should contact the program coordinator for the dual degree program for further information.

General non-degree and certificate students can transfer up to 16 semester credit hours of UTHealth School of Public Health coursework if accepted into a degree program, provided a passing grade is earned in the course, and the course is completed within five (5) years prior to matriculation into the degree program.

Credit hours toward a degree program's graduation requirements begin to accrue at the time of admission to and enrollment into the degree program and courses. Credit hours earned as part of a master's degree program do not count toward a doctoral degree program. The Department of Biostatistics and Data Science, and the Department of Epidemiology, Human Genetics and Environmental Sciences may admit students holding a bachelor's degree directly to the PhD programs (see "Admissions Process" section for details).

With the exception of applicants admitted directly to a PhD program, applicants to doctoral programs are expected to hold a master's degree in the relevant discipline. Applicants with a prior master's degree, but with deficits (i.e., no MPH or lack of master's level discipline courses for a PhD), may be admitted with the conditions of completing required leveling courses. After a student completes the required leveling courses listed in the admissions letter, with a grade of at least a "B," the conditions will be removed from the student's record. Conditions must be met prior to the preliminary examination. Students who fail to complete the conditions will be discontinued from the doctoral program. Completed courses will appear on the transcript, but will not be applied toward the doctoral degree. Leveling courses do not count towards a degree program. Credit hours toward a doctoral degree program's graduation requirements begin to accrue at the time of admission to and enrollment into the degree program and courses as follows:

- No credit hours for the leveling courses will be applied toward a doctoral degree.
- DrPH students must have previous evidence of, or UTHHealth School of Public Health course credit hours must include, all five core MPH courses.

A student is classified as “full-time” if enrolled in at least nine (9) semester credit hours during the fall or spring semesters, at least six (6) semester credit hours during a 12-week summer session, or at least three (3) semester credit hours during each 6-week summer session. Full-time students generally enroll in 12-16 credit hours per semester. While enrolled, students must take a minimum of three (3) credit hours each semester. Students are expected to enroll in culminating experience, thesis, or dissertation hours during the entire time that resources are being used in this endeavor. All courses taken by students accumulate semester credit hours, but no more than three (3) credit hours earned for the culminating experience and three (3) credit hours earned for the practicum may be counted toward the total credit hour minimum of the master’s degree. Six (6) credit hours earned for the dissertation and three (3) credit hours earned for the practicum may be counted toward the doctoral degree. All students must receive their Collaborative Institutional Training Initiative (CITI) – research ethics certification before they begin their culminating experience.

Enrollment is required in the semester in which the research proposal is submitted and continuously through the semester in which all requirements for graduation are completed. Enrollment is required prior to, during, or just after the semester in which the preliminary examination (DrPH and PhD programs) is taken and in the semester in which the student is involved in a practicum/internship (MPH and DrPH programs). Enrollment is required in the semester in which students graduate.

Students must maintain enrollment so that any absence from the degree program does not exceed one (1) calendar year (three (3) consecutive semesters) unless a formal leave of absence is granted. Policies and procedures regarding re-admission to a degree program are described in the “Grading, Conduct, and Satisfactory Progress Policies” section.

All research papers, theses, and dissertations authored by degree candidates are available to interested members of the general public upon request. Culminating experience documents, theses and dissertations are published electronically and are widely available.

General and specific requirements for degrees may be altered in successive catalogs. Students are bound by the requirements of the catalog in force at the time of their admission or readmission; however, students must complete all degree requirements within seven (7) years or be subject to the degree requirements of the catalog in effect at the time of graduation.

Time Limits on Degree Programs

Students are expected to complete master’s degree programs (MPH and MS) within five (5) years and doctoral degree programs (DrPH and PhD) within seven (7) years. In case of extenuating circumstances, a student may request a one-year extension. The possibility of a second year of extension exists under extraordinary circumstances. Students who do not graduate within the approved time limit will be dismissed from the program and must be readmitted in order to complete the degree program in effect at the time of readmission.

DEGREE LOCATIONS

	Houston	Austin	Brownsville	Dallas	El Paso	San Antonio
Master of Public Health - MPH						
Biostatistics	✓					
Community Health Practice	✓					
Customized	✓	✓	✓	✓	✓	✓
Environmental Health	✓				✓	✓
Epidemiology	✓	✓	✓	✓		✓
Health Promotion/Health Education	✓	✓	✓	✓	✓	✓
Healthcare Management	✓					
Health Services Organizations	✓					
Master of Science - MS						
Biostatistics	✓					
Epidemiology	✓	✓	✓	✓		✓
Doctor of Public Health - DrPH						
Community Health Practice	✓					
Health Promotion/Health Education	✓	✓	✓	✓	✓	
Doctor of Philosophy - PhD						
Behavioral Sciences and Health Promotion	✓	✓		✓		
Biostatistics	✓					
Environmental Science - Total Worker Health	✓				✓	✓
Environmental Science - Environmental Disease Prevention	✓				✓	✓
Epidemiology	✓	✓	✓	✓		✓
Health Economics and Health Services Research	✓					
Healthcare Management	✓					

MASTER OF PUBLIC HEALTH

The Master of Public Health (MPH) degree is the basic professional degree in the field of public health. It is required for many supervisory and managerial positions in public health and is recommended for many others. The MPH degree is a minimum of 45 semester credit hours.

Students are admitted to one of the departments or campuses listed in the Degree Location Table through which they complete a series of courses covering the breadth of public health and develop competencies appropriate for their elected discipline. Many courses and educational activities are available to qualified students across all disciplines. Students are encouraged to diversify their curricula by selecting among these opportunities.

Most students take approximately 24 months to complete the degree program. With careful planning some students may be able to complete the program in a less time. Part-time students should plan accordingly.

Customized MPH Program

The customized MPH program is available to many of our MPH students. Students eligible for the customized MPH program include:

- students admitted to any dual degree program
- students located at any SPH campus that does not offer the degree being pursued; and
- students in the Dietetic Internship.

Students eligible for the customized MPH have the option of electing an MPH major or of electing a customized MPH degree plan. Students eligible to elect the customized MPH program will be required to complete a career goal analysis process, which includes identifying career and educational goals followed by curriculum planning with their advisor. Students will work with their advisor to select a minimum of 5 competencies to be met in an advanced public health area. These competencies are in addition to the MPH core competencies.

Dual degree students who are eligible and want to transfer from a degree major to a customized MPH program must complete the required forms posted on the UTHealth School of Public Health Student Services website.

Admission Requirements:

- The degree of MD, DDS, DO, PharmD, or DVM from a regionally accredited school, or a bachelor's or more advanced degree, in an appropriate field, from a regionally accredited university or school;
- Previous public health experience or evidence of the potential to contribute significantly to public health programs and services, particularly to underserved and vulnerable populations. The applicant must submit an original statement of purpose & objectives and may include a curriculum vitae, copies of reports, articles, recommendations, or other written material believed to reflect such potential;
- Graduate Record Exam (GRE) or the Medical College Admissions Test (MCAT) scores are required for all MPH degree-seeking applicants and are reviewed by the Admissions Committee as one factor among others. Applicants holding previous doctoral-level degrees from accredited U.S. or Canadian universities may request an exemption from the GRE/MCAT requirement. Applicants to dual degree programs that have a doctoral component (e.g., MD or JD) are exempted from the GRE requirement, provided they hold an offer of admission to the participating medical or law school. Applicants who hold an international medical degree and hold Educational Commission

for Foreign Medical Graduates certification may request a waiver of the GRE requirement provided they are currently practicing medicine or in an active residency program in the United States at the time of applying;

- All international applicants must take the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). Information and application booklets may be obtained by contacting the Educational Testing Service directly at <http://www.ets.org/toefl/> or <https://www.ielts.org/en-us>. A minimum acceptable score of 600 on paper-based TOEFL, 250 on computer-based TOEFL, or 100 on internet-based TOEFL is required for admission to our school. For IELTS a minimum acceptable overall score of 7.5 is required for admission to our school. Test scores are valid for 2 years from the test date. The scores should be forwarded to SOPHAS using the reporting code 5688 (TOEFL). No department code is needed. Exceptions to this requirement:
 1. If you are a Permanent Resident or Citizen of the United States
 2. If you earned a bachelor's degree or doctoral degree from the United States
 3. Applicants' country of origin from the following English-speaking countries may be exempted from submitting TOEFL/IELTS scores: Australia, Bahamas, Canada, Ireland, Jamaica, New Zealand, Trinidad and Tobago, Uganda, and United Kingdom.
- Exemptions on a case-specific basis for those applicants who do not meet the above criteria; and
- Submission of application and supporting documents by the application deadline.

See "Application Procedures and Deadline Dates" and "Admissions Process" section for more information.

Degree Requirements

- Satisfactory completion of a prescribed course of study of at least one (1) academic year, a minimum of 45 semester credit hours (only three (3) credit hours of practicum and three (3) credit hours of thesis or culminating experience count toward the minimum of 45 semester credit hours; therefore at least 39 credit hours of courses other than practicum, thesis or culminating experience must be successfully completed), and demonstration of a breadth of knowledge in the disciplines basic to public health;
- Satisfactory completion of a planned, supervised, and evaluated practice experience (practicum) that includes the application of public health science and theory;
- Satisfactory completion of the Capstone Course or culminating experience document, written in English, demonstrating a substantial knowledge of public health; and
- Satisfactory delivery of an oral presentation of the culminating experience project. All completed written culminating experience documents will be made available to the general public.

Practicum

The practicum, or applied practice experience, is an essential part of the MPH curriculum and is a requirement of the Council on Education for Public Health (CEPH, the accrediting body of all U.S. schools of public health) for completion of the MPH degree. The practicum consists of an organized internship at an extramural agency or organization engaged in work related to public health. Alternatively, the practicum may be done intramurally if the project interacts with practice agencies. Students are expected to spend of at least 12 hours per week (approximately 180-200 hours total) working on the practicum project. Registration for the practicum seminar is required during the semester of the practicum.

Culminating Experience

The culminating experience is a CEPH requirement for completion of the MPH degree. It requires the synthesis and integration of knowledge and skills acquired in the degree program and their application to some aspect of professional practice. The culminating experience may be a Capstone course or can take the form of a thesis or project report that meets criteria set forth by the school. With the approval of the

advisory committee, a student may elect to include an article of publishable quality consistent with the standards of a peer-reviewed journal. The article is part of the final submission to the Office of Research and Practice and contains all supporting elements of an acceptable culminating experience. In all culminating experience options, students investigate public health issues, generate written work, and give an oral presentation of their research findings.

Advisory Committee

An academic advisor is assigned to students at the time of admission. MPH students who elect a concentration will be required to add one additional member to their committee to represent the concentration (unless the advisor also represents the concentration). If a student chooses to complete a written culminating experience (e.g., thesis), a second member may be added from within or outside the school. Committee membership is approved by the Director of Academic Affairs and Student Services. During evaluation week at the end of each fall and spring semester, MPH students meet with their advisory committee to review the academic plan and assess their progress toward completion of the degree program.

Core Requirements for MPH Students

The following courses satisfy the MPH core public health discipline requirement.

PHM 1690 *Introduction to Biostatistics in Public Health*

PHM 2612 *Epidemiology I*

PHM 2110 *Public Health Ecology & the Human Environment*

PHM 1110 *Health Promotion and Behavioral Sciences in Public Health*

PHM 3715 *Management and Policy Concepts in Public Health*

PHM 5015 *Introduction to Qualitative Research in Public Health*

MASTER OF SCIENCE

The Master of Science (MS) degree signifies scholarly accomplishment in a public health discipline and is offered to those who plan careers in teaching and research. MS students are expected to focus in one area while gaining an understanding of the interrelations within the public health disciplines. The MS degree is a minimum of 36 semester credit hours.

Students are encouraged to draw upon the resources of the school, but may also work with faculty at other institutions of higher learning in Houston. The academic plan is guided by the faculty advisor, the student, and the advisory committee to advance the student's specific educational goals. A student elects one field as a major and selects another public health discipline as a minor area of study. Most full-time MS students take at least two (2) years to complete all degree requirements. The full range of courses to support a minor or breadth area may not be available at all campuses.

Admission Requirements:

- Prior bachelor's or a more advanced degree, in an appropriate field of study, from a regionally accredited university or college;
- An original personal statement of purpose & objectives;
- Graduate Record Examination (GRE) scores are required for all degree-seeking applicants;
- All international applicants must take the Test of English as a Foreign Language (TOEFL) or the International English Testing System (IELTS). Information and application booklets may be obtained by contacting the Educational Testing Service directly at <http://www.ets.org/toefl/> or <https://www.ielts.org/en-us>. A minimum acceptable score of 600 on paper-based TOEFL, 250 on computer-based TOEFL, or 100 on internet-based TOEFL is required for admission to our school. For IELTS, a minimum acceptable overall score of 7.5 is required for admission to our school. Test scores are valid for 2 years from the test date. The scores should be forwarded to SOPHAS using the reporting code 5688 (TOFEL). No department code is needed. Exceptions to this requirement:
 1. If you are a Permanent Resident or Citizen of the United States
 2. If you earned a bachelor's degree or doctoral degree from the United States
 3. Applicants' country of origin from the following English-speaking countries may be exempted from submitting TOEFL/IELTS scores: Australia, Bahamas, Canada, Ireland, Jamaica, New Zealand, Trinidad and Tobago, Uganda, and United Kingdom.
- Exemptions on a case-specific basis for those applicants who do not meet the above criteria; and
- Submission of application and supporting documents by the application deadline.

See "Application Procedures and Deadline Dates" and "Admissions Process" section for more information.

Degree Requirements

- Satisfactory completion of a prescribed course of study, including one major and one minor, of at least one (1) academic year and at least 36 semester credit hours. If the student chooses a practicum, no more than three (3) credit hours of practicum and three (3) credit hours of dissertation count toward the minimum of 36 credit hours. If the student does not choose a practicum, no more than six (6) semester credit hours of the 36-credit hour minimum may be earned for thesis research. Therefore, at least 30 credit hours of courses other than practicum or thesis must be successfully completed);
- Satisfactory completion of the breadth of knowledge requirement: **PHM 2612 Epidemiology I**
- Satisfactory completion of a research thesis, written in English, deemed by the faculty to be of excellent quality and to demonstrate an appropriate depth of knowledge in the field of study. If approved by the student's advisory committee, a student may elect to include an article of

publishable quality consistent with the standards of a peer-reviewed journal. The article is a part of the final submission to the Office of Research and contains all supporting elements of an acceptable research thesis; and

- Satisfactory delivery of an oral presentation of their thesis defense. All completed theses will be made available to the general public.

All courses taken by students count toward their degree, but no more than six (6) semester credit hours of the 36-credit hour minimum may be earned for thesis research.

MS Public Health Breadth of Knowledge Requirement

To ensure that MS students cover the public health breadth of knowledge and achieve related competencies in their degree program, which includes the ability to synthesize and apply their public health communication, professionalism, and leadership skills to a public health problem, MS students will be required to successfully complete the following course in the first year of their MS degree program:

PHM 2612 *Epidemiology I*

Practicum

A practicum, or applied practice experience, consists of an organized internship at an extramural agency or organization engaged in work related to public health, or located in an intramural center or project that interacts with practice agencies. Although MS students are encouraged to include a practicum in their degree plan, it is not required for the MS degree. If the student chooses a practicum, no more than three (3) credit hours of practicum and three (3) credit hours of dissertation count toward the minimum of 36 credit hours. If the student does not choose a practicum, no more than six (6) semester credit hours of the 36-credit hour minimum may be earned for thesis research.

Advisory Committee

An academic advisor is assigned to each student at the time of admission. One additional member to represent the minor discipline from the UTHealth School of Public Health is required for MS students. The member representing the minor discipline will be chosen by the student. Committee membership is approved by the Director of Academic Affairs and Student Services.

DOCTOR OF PUBLIC HEALTH

The Doctor of Public Health (DrPH) degree signifies distinguished scholarly accomplishment. The DrPH degree is a minimum of 48 semester credit hours.

In order to complete a degree with appropriate public health breadth, DrPH students are required to complete either one minor area of study (nine (9) credit hours) in one of the five public health disciplines (separate from the major area) and one public health breadth (a 9-credit hour course of study around a topical or methodological theme), or complete two minors. The disciplinary minor is based on the student's degree plan and the required minor courses from the department. The full range of courses to support a minor or breadth area may not be available at all campuses.

Admission Requirements:

- Prior MPH degree or equivalent preparation from a regionally accredited university or college;
- An original personal statement of purpose & objectives;
- Outstanding promise for scholarly accomplishment and professional leadership for extending public health practice, particularly to underserved and vulnerable populations. In addition to the MPH, evidence of the potential to contribute significantly to public health could include previous or current employment in a public health or health-related agency or service to such agencies, a curriculum vitae, copies of reports, articles, recommendations, or other written material believed to reflect such potential;
- Supporting letters of recommendation documenting and evaluating the applicant's achievements;
- Graduate Record Examination (GRE) scores are required for all degree-seeking programs; All international applicants must take the Test of English as a Foreign Language (TOEFL) or the International English Testing System (IELTS). Information and application booklets may be obtained by contacting the Educational Testing Service directly at <http://www.ets.org/toefl/> or <https://www.ielts.org/en-us>. This requirement applies even if you attended a graduate institution and earned only a Master's Degree. A minimum acceptable score of 600 on paper-based TOEFL, 250 on computer-based TOEFL, or 100 on internet-based TOEFL is required for admission to our school. For IELTS, a minimum acceptable overall score of 7.5 is required for admission to our school. Test scores are valid for 2 years from the test date. The scores should be forwarded to SOPHAS using the reporting code 5688 (TOFEL). No department code is needed. Exceptions to this requirement:
 1. If you are a Permanent Resident or Citizen of the United States
 2. If you earned a bachelor's degree or doctoral degree from the United States
 3. Applicants' country of origin from the following English-speaking countries may be exempted from submitting TOEFL/IELTS scores: Australia, Bahamas, Canada, Ireland, Jamaica, New Zealand, Trinidad and Tobago, Uganda, and United Kingdom.
- Exemptions on a case-specific basis for those applicants who do not meet the above criteria; and
- Submission of application and supporting documents by the application deadline.

See "Application Procedures and Deadline Dates" and "Admissions Process" section for more information.

Degree Requirements

- Satisfactory completion of a prescribed course of study, comprising a minimum of at least 48 semester credit hours (only three (3) credit hours of practicum and six (6) credit hours of dissertation count toward the minimum of 48 credit hours; therefore, at least 39 credit hours of courses other than practicum, thesis, or dissertation must be successfully completed). A minor or breadth area is required;
- Satisfactory completion of a planned, supervised, and evaluated practicum that includes the application of public health science and theory;

- Satisfactory performance on a preliminary examination as described by the degree program (the preliminary examination will be taken after the courses prescribed by the degree program have been successfully completed);
- Satisfactory defense of the dissertation proposal; and
- Satisfactory completion of an original research dissertation, written in English, that makes a substantial contribution to knowledge in the public health sciences. The dissertation requirement will be fulfilled when an oral defense of the dissertation research proposal and of the completed dissertation have been successfully completed, the document has been approved and signed by all members of the dissertation committee, and a copy has been filed in the Dean's Office. All completed dissertations will be made available to the public.

If a student is unable to successfully complete (i.e., demonstrate competence in) the preliminary examination after two attempts, the student will be dismissed from the DrPH program. That student may be provided an opportunity to complete the MPH degree program (if the student does not already possess a MPH degree), but the opportunity is not automatic, and acceptance into the MPH program is decided collectively by departmental faculty.

Practicum

The DrPH practicum, or applied practice experience, is designed to:

- Relate to the student's academic goals and professional interests, as well as specific learning objectives
- Provide opportunities for professional advancement of specific competencies that the student has not yet mastered in their coursework or prior professional experience
- Facilitate the application of public health leadership principles to address a need identified by the host organization through service learning
- Demonstrate the student's application of public health concepts through observational and performance-based evaluation by the preceptor, faculty, and student
- Provide experiences in developing advocacy and/or leadership skills through collaboration with senior public health practitioners

Students are expected to spend a total of at least 180-200 hours total at the practicum site. Community preceptors, selected based on evidence of specific skills, provide extensive mentoring to students.

Advisory Committee

All admitted DrPH students are assigned an academic advisor who will assist them in preparing for the preliminary examination. Upon successful completion of the preliminary examination, students will constitute a dissertation committee.

Dissertation Committee

The defense of the dissertation proposal is the second part of the student's candidacy process. Upon successful completion of the preliminary examination, students will constitute a dissertation committee composed of a dissertation advisor from the student's major department, who may or may not be the academic advisor, and two other members knowledgeable in the breadth and, or minor areas of interest. The dissertation committee will help develop a curriculum that supports the student's research and career goals. This committee can be changed as research interests become more focused. The dissertation committee will also be responsible for evaluating the oral defense of the dissertation research proposal and the oral defense of the completed dissertation. The committee membership must be approved by the Director for Academic Affairs and Student Services.

The dissertation requirement will be fulfilled when an oral defense of the dissertation research proposal and of the completed dissertation have been successfully completed, the document has been approved and signed by all members of the dissertation committee, and a copy has been filed in the Dean's Office.

Required Review and Degree Time Limits

Any student who has been admitted to candidacy for a DrPH degree (i.e., following successful completion of the preliminary examination and dissertation proposal defense) is expected to complete the degree within four (4) years from the date of admission to candidacy, not to exceed seven (7) years total time in the degree program. A one-year extension may be granted on recommendation of the dissertation committee (when the 4-year time limit after the preliminary examination is reached). Recommendations of the dissertation committee are forwarded to the Director of Academic Affairs and Student Services. Under special circumstances, a second one-year extension may be granted.

DOCTOR OF PHILOSOPHY

The Doctor of Philosophy (PhD) degree in Public Health represents outstanding scholarly attainment and signifies a capacity for independent study. It is primarily a research and teaching degree. The PhD degree is a minimum of 48 semester credit hours.

In order to complete a degree with appropriate public health breadth, PhD students are required to complete two disciplinary minor areas of study (each in one of the five public health disciplines separate from their major area) or a disciplinary minor and a breadth area (a 9-credit hour course of study around a topical or methodological theme). A disciplinary minor requires the successful completion of at least nine (9) semester credit hours that address competencies as specified by the student's advisory committee (it is strongly recommended that either the breadth or minor be focused on leadership). The disciplinary minor is based on the student's degree plan and the recommended minor courses from the department. The full range of courses to support a minor or breadth area may not be available at all campuses.

Admission Requirements for Bachelor's Prepared Applicants

Direct admission to the PhD degree program for those holding a bachelor's degree is offered in the Biostatistics and Data Sciences or Epidemiology departments.

Biostatistics and Data Sciences:

- Prior bachelor's degree in a mathematical, biomedical, or physical science from a regionally accredited university or college;
- An original personal statement of purpose & objectives;
- Outstanding promise of scholarly accomplishment and research capability;
- Graduate Record Examination (GRE) scores are required for all degree-seeking programs;
- All international applicants must take the Test of English as a Foreign Language (TOEFL) or the International English Testing System (IELTS). Information and application booklets may be obtained by contacting the Educational Testing Service directly at <http://www.ets.org/toefl/> or <https://www.ielts.org/en-us>. A minimum acceptable score of 600 on paper-based TOEFL, 250 on computer-based TOEFL, or 100 on internet-based TOEFL is required for admission to our school. For IELTS, a minimum acceptable overall score of 7.5 is required for admission to our school. Test scores are valid for 2 years from the test date. The scores should be forwarded to SOPHAS using the reporting code 5688 (TOFEL). No department code is needed. Exceptions to this requirement:
 1. If you are a Permanent Resident or Citizen of the United States
 2. If you earned a bachelor's degree or doctoral degree from the United States
 3. Applicants' country of origin from the following English-speaking countries may be exempted from submitting TOEFL/IELTS scores: Australia, Bahamas, Canada, Ireland, Jamaica, New Zealand, Trinidad and Tobago, Uganda, and United Kingdom.
- Exemptions on a case-specific basis for those applicants who do not meet the above criteria;
- Submission of application and supporting documents by the application deadline.

See "Special Entrance Requirements" subsection in the "Biostatistics" section for further information.

Epidemiology:

- Prior bachelor's degree that indicates the development of strong scientific and analytical skills, such as a degree in biology, biochemistry, mathematics, or statistics;
- An original personal statement of purpose & objectives;
- Outstanding promise of scholarly accomplishment and research capability;
- Graduate Record Examination (GRE) scores are required for all degree-seeking programs;

- All international applicants must take the Test of English as a Foreign Language (TOEFL) or the International English Testing System (IELTS). Information and application booklets may be obtained by contacting the Educational Testing Service directly at <http://www.ets.org/toefl/> or <https://www.ielts.org/en-us>. A minimum acceptable score of 600 on paper-based TOEFL, 250 on computer-based TOEFL, or 100 on internet-based TOEFL is required for admission to our school. For IELTS, a minimum acceptable overall score of 7.5 is required for admission to our school. Test scores are valid for 2 years from the test date. The scores should be forwarded to SOPHAS using the reporting code 5688 (TOFEL). No department code is needed. Exceptions to this requirement:
 1. If you are a Permanent Resident or Citizen of the United States
 2. If you earned a bachelor's degree or doctoral degree from the United States
 3. Applicants' country of origin from the following English-speaking countries may be exempted from submitting TOEFL/IELTS scores: Australia, Bahamas, Canada, Ireland, Jamaica, New Zealand, Trinidad and Tobago, Uganda, and United Kingdom.
- Exemptions on a case-specific basis for those applicants who do not meet the above criteria; and
- Submission of application and supporting documents by the application deadline.

See "Special Entrance Requirements" subsection in the "Epidemiology" section for further information.

Admission Requirements for Master's or Doctoral Prepared Applicants:

- Prior master's or a more advanced degree, in an appropriate field of study, from a regionally accredited university or college;
- An original personal statement of purpose & objectives;
- Outstanding promise of scholarly accomplishment and research capability;
- Graduate Record Examination (GRE) scores are required for all degree-seeking programs;
- All international applicants must take the Test of English as a Foreign Language (TOEFL) or the International English Testing System (IELTS). Information and application booklets may be obtained by contacting the Educational Testing Service directly at <http://www.ets.org/toefl/> or <https://www.ielts.org/en-us>. A minimum acceptable score of 600 on paper-based TOEFL, 250 on computer-based TOEFL, or 100 on internet-based TOEFL is required for admission to our school. For IELTS, a minimum acceptable overall score of 7.5 is required for admission to our school. Test scores are valid for 2 years from the test date. The scores should be forwarded to SOPHAS using the reporting code 5688 (TOFEL). No department code is needed. Exceptions to this requirement:
 1. If you are a Permanent Resident or Citizen of the United States
 2. If you earned a bachelor's degree or doctoral degree from the United States
 3. Applicants' country of origin from the following English-speaking countries may be exempted from submitting TOEFL/IELTS scores: Australia, Bahamas, Canada, Ireland, Jamaica, New Zealand, Trinidad and Tobago, Uganda, and United Kingdom.
- Exemptions on a case-specific basis for those applicants who do not meet the above criteria; and
- Submission of application and supporting documents by the application deadline.

See "Application Procedures and Deadline Dates" and "Admissions Process" section for information.

Degree Requirements

- For students with a master's degree, satisfactory completion of a prescribed course of study of at least one (1) academic year and a minimum of at least 48 semester credit hours (only three (3) credit hours of practicum, if taken), and six (6) credit hours of dissertation count toward the minimum of 48 credit hours; therefore, at least 39 credit hours of courses other than practicum, thesis, or dissertation); for students with a bachelor's degree, satisfactory completion of a

prescribed course of study of at least one (1) academic year and a minimum of at least 72 semester credit hours. Two minors or a minor and a breadth area are required;

- Satisfactory completion of one epidemiology course, if one is not already covered in the major, minor, or breadth areas;
- Satisfactory performance (i.e., demonstrated competency) on a preliminary examination as described by the degree program. The preliminary examination may be taken after the courses prescribed by the degree program have been successfully completed;
- Satisfactory defense of the dissertation proposal; and
- Satisfactory completion of an original research dissertation, written in English, that makes a substantial contribution to knowledge in the public health sciences. The dissertation requirement will be fulfilled when an oral defense of the dissertation research proposal and of the completed dissertation have been successfully completed, the document has been approved and signed by all members of the dissertation committee, and a copy has been filed in the Dean's Office. All completed dissertations will be made available to the general public.

If the student is unable to successfully complete (demonstrate competence in) the preliminary examination after two attempts, the student will be dismissed from the PhD program. For students with a bachelor's degree, the opportunity to complete a MS degree program is not automatic, and acceptance into the MS program is decided by departmental faculty.

If the student does not choose a practicum, no more than a total of nine (9) semester credit hours of the 48-semester credit hour minimum may be earned for dissertation research. If the student chooses a practicum no more than three credit hours of practicum (if taken) and six credit hours of dissertation count toward the minimum of 48 credit hours.

Enrollment is required prior to, during, or immediately after the semester in which the preliminary examination is taken. Candidates for a PhD degree must also be enrolled during the semester in which the research proposal is submitted and continuously after the proposal is approved and the dissertation research completed.

Practicum

A practicum, or applied practice experience, consists of an organized internship at an extramural agency or organization engaged in work related to public health, or at an intramural center or project that interacts with practice agencies. PhD students are encouraged to include a practicum in their degree plan, but it is not required for the PhD degree. If the student chooses an applied practice, no more than three (3) credit hours of applied practice and six (6) credit hours of dissertation count toward the minimum 48-credit hours. If the student does not choose an applied practice, no more than nine (9) semester credit hours of the 48-semester credit hour minimum may be earned for dissertation research.

Advisory Committee

All admitted PhD students are assigned an academic advisor who will assist the student in preparing for the preliminary examination. Upon successful completion of the preliminary examination, students will constitute a dissertation committee.

Dissertation Committee

The defense of the dissertation proposal is the second part of the student's candidacy process. Upon successful completion of the preliminary examination, students will constitute a dissertation committee composed of a dissertation advisor from the student's major department, who may or may not be the academic advisor, and two other members knowledgeable in the breadth and minor areas of interest. The

dissertation committee will help develop curriculum that supports the student's research and career goals. This committee can be changed as research interests become more focused. The dissertation committee will also be responsible for evaluating the oral defense of the dissertation research proposal and the oral defense of the completed dissertation. Committee membership must be approved by the Director of Academic Affairs and Student Services.

The dissertation requirement will be fulfilled when an oral defense of the dissertation research proposal and of the completed dissertation have been successfully completed, the document has been approved and signed by all members of the dissertation committee, and a copy has been filed in the Dean's Office.

Required Review and Degree Time Limits

Any student who has been admitted to candidacy for a PhD degree (i.e., successful completion of the preliminary examination and dissertation proposal defense) is expected to complete the degree within four (4) years from the date of admission to candidacy, not to exceed seven (7) years total time in the degree program. A one year extension may be granted on recommendation of the dissertation committee (when the 4-year time limit after the preliminary examination is reached). Recommendations of the dissertation committee are forwarded to the Director of Academic Affairs and Student Services. Under special circumstances, a second one-year extension may be granted.

DUAL DEGREE PROGRAMS

Dual degree programs at UTHealth School of Public Health are designed so that the curricula of both degrees are integrated to the extent possible. Through these programs, students are able to complete two degrees in a shorter time period than completing each separately because some specified courses count toward both degrees. Students interested in a dual degree program must apply and be admitted separately to each institution according to the usual application procedures of each institution and meet the requirements of each institution for its respective degree. Admission to one program does not ensure admission to the other program. More information about the following dual degree programs can be found on the UTHealth School of Public Health website.

	Houston	Austin	Brownsville	Dallas	El Paso	San Antonio
DDS/MPH Programs						
UTHealth School of Dentistry	✓					
JD/MPH Programs						
University of Houston Law Center	✓					
MBA/MPH Programs						
The University of Texas at San Antonio College of Business						✓
MD/MPH Programs						
Baylor College of Medicine	✓					
Dell Medical School		✓				
McGovern Medical School	✓					
Texas Tech University, Paul Foster School of Medicine					✓	
UTHealth San Antonio, Long School of Medicine						✓
UT Southwestern Medical School				✓		
University of Texas Rio Grande Valley			✓			
MGPS/MPH Programs						
The University of Texas at Austin LBJ School of Public Affairs		✓				
MPAff/MPH Programs						
The University of Texas at Austin LBJ School of Public Affairs		✓				
MS/MPH Programs						
UTHealth School of Biomedical Informatics	✓	✓	✓	✓	✓	✓
MSSW/MPH Programs						
The University of Texas at Austin School of Social Work		✓				
MSW/MPH Programs						
The University of Houston School of Social Sciences	✓					
PhD/MPH Programs						
UTHealth School of Biomedical Sciences	✓					

GRADUATE CERTIFICATES AND ACCELERATED MASTER'S PROGRAM (4+1 PROGRAM)

Graduate Certificates

Graduate certificates are available to non-degree seeking students and current, degree-seeking students. A complete list of certificates is listed in the chart below. More information and course requirements can be found on the UTHealth School of Public Health website.

Graduate certificates for non-degree seeking students provides the opportunity to take courses for credit at UTHealth School of Public Health without pursuing a formal degree. A special application procedure is required for admission as a non-degree student. The application and a description of the admissions process can be found on the UTHealth School of Public Health website. Admission to a non-degree program does not ensure subsequent admission to a degree program. Students interested in applying to a degree program must follow the usual application procedure. Certificate courses may be applied toward the required credit hours of a degree program at UTHealth School of Public Health provided that a passing grade in each course is earned; the course is completed within five (5) years of matriculation into the degree program; and the applicant meets all the admission requirements to the degree program. However, because no more than 16 credit hours can be applied toward a degree program, students interested in taking more than 16 credit hours are strongly advised to apply for admission to a degree program.

Degree-seeking students who are currently pursuing a graduate degree are not required to complete the non-degree application procedure before pursuing a graduate certificate.

	Houston	Austin	Brownsville	Dallas	El Paso	San Antonio
Graduate Certificates for Degree-Seeking Students						
Clinical Nutrition and Public Health	✓					
Culinary Nutrition and Public Health	✓					
Data Science	✓	✓	✓	✓	✓	✓
Genomics & Bioinformatics	✓	✓	✓	✓	✓	✓
Global Health	✓	✓	✓	✓	✓	✓
Healthcare Administration	✓	✓	✓	✓	✓	✓
Health Disparities	✓	✓	✓	✓	✓	✓
Maternal & Child Health	✓	✓	✓	✓	✓	✓
Nutrition and Public Health	✓	✓	✓	✓	✓	✓
Physical Activity & Health	✓	✓	✓	✓	✓	✓
Graduate Certificates for Non-Degree Seeking Students						
Clinical Nutrition and Public Health	✓					
Culinary Nutrition and Public Health	✓					
Data Science	✓	✓	✓	✓	✓	✓
Public Health Certificate	✓	✓	✓	✓	✓	✓
Genomics & Bioinformatics	✓	✓	✓	✓	✓	✓
Healthcare Administration	✓	✓	✓	✓	✓	✓
Health Disparities	✓	✓	✓	✓	✓	✓
Maternal & Child Health	✓	✓	✓	✓	✓	✓
Public Health Informatics	✓	✓	✓	✓	✓	✓

Clinical Nutrition and Public Health Certificate (14 semester credit hours)

This certificate is designed to prepare those in the public health and health care workforce to understand the role of nutrition in disease prevention and health promotion, nutrition assessment, nutritional epidemiologic methods, nutritional physiology, nutritional health policy, and culinary medicine.

Culinary Nutrition and Public Health Certificate (13 semester credit hours)

This certificate is designed to prepare those in the public health and health care workforce to understand the role of nutrition in disease prevention and health promotion, nutrition assessment, nutritional physiology, and culinary medicine.

Data Science Certificate (14 semester credit hours)

This certificate is intended for professionals working in health care or industries related to public health research and biostatistics, and consists of coursework in data science, data analytics and predictions, analytic methods, and data management.

Genomics and Bioinformatics Certificate (12 semester credit hours)

This certificate is intended for professionals in academic, clinical, and research settings who are now or soon to be faced with genomic and related data. The goal is to enable a generation of investigators and academicians capable of integrating genomic and related high-dimensional data seamlessly into population and personalized health.

Global Health Certificate (12 semester credit hours)

This certificate is intended for students interested in exploring how globalization is affecting the determinants of health, the health status of the population, and the capacity of nation states to deal with the determinants of health and disease. The goal is to prepare students for positions that involve public health decision-making and research in a changing world.

Health Disparities Certificate (12 semester credit hours)

This certificate provides an orientation for individuals who are working in public health or health care and seeking to focus their work to the recognition, description and elimination of health disparities that have been defined as differences in “the overall rate of disease incidence, prevalence, morbidity, mortality or survival rates.”

Healthcare Administration Certificate (15 semester credit hours)

This certificate is intended for professionals working in healthcare management and students enrolled in post-baccalaureate degree programs in complementary graduate level disciplines such as business, health care, public policy, public administration, or health sciences. This certificate is designed to meet the needs of students, employers, and community partners.

Maternal & Child Health Certificate (12 semester credit hours for degree-seeking students; 15 semester credit hours for non-degree-seeking students)

This certificate is designed to equip students with skills to professionally promote and enhance the health of women, children, and their communities on a local, state, federal, and international level, while working as advocates in health care organizations, academic institutions, and other public and private organizations. An in-depth diverse curriculum provides skills development in reproductive, perinatal, child, and adolescent health.

Nutrition and Public Health Certificate (9 semester credit hours)

This certificate provides opportunities and training for students to focus on dietary assessment methodology, nutritional epidemiology, food policy and systems, behavioral nutrition interventions, and medical

nutrition therapy. The goal is to prepare students to understand the role of nutrition in disease prevention and health promotion, dietary assessment, nutritional epidemiologic methods, nutritional physiology, and food and nutrition policy.

Physical Activity & Public Health Certificate (12 semester credit hours)

This certificate provides opportunities and training for students to focus on physical activity assessment, epidemiologic methods, intervention planning, physiologic mechanisms and health outcomes, and policy development. This certificate also focuses on the possible causes and consequences of physical inactivity on health in individuals and populations and provides hands-on opportunities for skills development in the areas of measurement, intervention, and environmental and policy change.

Public Health Certificate (16 semester credit hours)

This certificate is intended for public health practitioners and individuals who are interested in increasing their basic public health knowledge or are considering a graduate degree in the field. These courses cover the core content of the disciplines that are basic to public health.

Public Health Informatics (16 semester credit hours)

This certificate is a joint program between UTHealth School of Biomedical Informatics and UTHealth School of Public Health and was created to address the growing emphasis of public health informatics at the national level and the increased market demand.

Accelerated Master’s Programs (4+1 Program)

Undergraduate students matriculating at a school or college external to UTHealth School of Public Health will have the opportunity to earn both a bachelor’s degree and a Master of Public Health through UTHealth School of Public Health over the course of five (5) years through an integrated program that overlaps graduate courses into the student’s undergraduate work in the senior year of the undergraduate program. Students apply as non-degree Public Health Certificate students during their undergraduate program. Once students graduate with their Bachelor’s degree, they will apply as a degree-seeking MPH student where their certificate courses will be applied to their MPH degree. These educational agreements are listed as Accelerated Master Programs. UTHealth School of Public Health holds the following program agreements with the following educational entities.

	Houston	Austin	Brownsville	Dallas	El Paso	San Antonio
Accelerated Master’s Programs (4+1 Program)						
Public Health Certificate/Austin College				✓		
Public Health Certificate/Rice University	✓					
Public Health Certificate/ Schreiner University						✓
Public Health Certificate/St. Mary’s University						✓
Public Health Certificate/The University of Texas at Austin		✓				
Public Health Certificate/ The University of Texas at San Antonio						✓
Public Health Certificate/ University of Houston	✓					
Public Health Certificate/University of Texas Rio Grande Valley			✓			
Public Health Certificate/ UTHealth School of Dentistry, Dental Hygiene Program	✓					

SPECIAL PROGRAMS

UTSPH offers special programs for degree-seeking students and non-degree seeking students.

Special Programs for Degree-Seeking Students

Current, degree-seeking students are eligible to participate in the following special programs to enhance their educational experience. More information including background requirements, can be found on the UTHealth School of Public Health website.

Archer Center Fellowship Program

This program provides students with an opportunity to learn about the federal government and public policy. Fellows spend 12 weeks interning in a Washington, D.C. organization of their choosing based on their own professional and academic goals and interests. Students in this program will earn 9 credit hours of coursework. Archer Center Program Fee: \$3,900

Dietetic Internship

The Dietetic Internship Program offers the opportunity to pursue a dietetic internship in conjunction with a graduate degree in public health. This is a two-year program with a program fee of \$5,000 effective Fall 2018. To be eligible to apply for this program, individuals must have a background in nutrition and dietetics and a verification statement from a didactic program in dietetics. Separate applications are required for each program, and admission to one program does not guarantee admission to the other. Applications for fall admission to UTHealth School of Public Health must be received by December 1st of the year prior to anticipated admission; applications for the dietetic internship through DICAS must be received by February 15th. The Dietetic Internship Program is fully accredited by the Academy of Nutrition and Dietetics and participates in their national matching program. The program is also approved by The Accreditation Council for Education in Dietetic. The Dietetic Internship Program provides more than 1200 supervised practice hours in four major areas of dietetics: Public Health Nutrition, Food Service Systems Management, Medical Nutrition Therapy, and Specialty Practice. Students accepted into the program are placed in affiliated entities and institutions within the Texas Medical Center and throughout the city of Houston and Harris County. The Dietetic Internship Program is administered through the Michael & Susan Dell Center for Healthy Living (www.msdcenter.org). For further information on the Dietetic Internship Program, please see the website at <https://sph.uth.edu/research/centers/dell/dietetic-internship-program/>.

Maternal and Child Health Trainee Fellowship Program

The Maternal and Child Health Trainee Fellowship Program is open to students enrolled in the Maternal and Child Health Certificate who are interested in a year-long intensive training experience in maternal and child health. The MCH Trainee Fellowship Program will identify a cohort of professionals from Medicine, Nursing, Nutrition, Public Health and Social Work, and develop them as a team of interdisciplinary professionals committed to maternal and child health. The fellowship program is currently available to all students at UTHealth School of Public Health who are currently enrolled or plan to enroll in the MCH certificate program. The MCH Trainee Fellowship program will include a Conductive Leadership Curriculum as well as experiential placements working on maternal and child health-related projects and programs with local and state agencies.

Residency Program in Occupational and Environmental Medicine

The Residency Program in Occupational and Environmental Medicine has been continuously accredited since 1977 by the Accreditation Council for Graduate Medical Education (ACGME) and offers occupational and environmental medicine residency training to qualified physicians in preparation for certification by the American Board of Preventive Medicine. The residency consists of a two-year plan of study (including

a specialized MPH curriculum and progressive clinical training). Applicants must possess the MD or DO degree and must have completed a minimum of one (1) year of clinical training in an ACGME-accredited program. Residency application is via the Electronic Residency Application Service (ERAS) of the American Association of Medical Colleges. Candidates not already holding the MPH degree or its equivalent must apply for and achieve admission to the MPH degree program at UTHealth School of Public Health prior to joining the residency. More information on the Residency Program in Occupational and Environmental Medicine can be found on the UTHealth School of Public Health website.

Special Programs for Non-degree Seeking Students

Non-degree seeking students have the opportunity to take courses for credit at UTHealth School of Public Health without pursuing a formal degree. A special application procedure is required for admission as a non-degree student. The application and a description of the admissions process can be found on the UTHealth School of Public Health website. Admission to a non-degree program does not ensure subsequent admission to a degree program. Students interested in applying to a degree program must follow the usual application procedure.

Baylor College of Medicine Educational Collaboration

Students enrolled in the Baylor College of Medicine's (BCM) Clinical Scientist Training Program, including students in both the BCM Master of Science and Certificate Programs, may apply as non-degree students to UTHealth School of Public Health. Typically, non-degree students under this program agreement are eligible to enroll in four to six courses, depending on their needs.

The University of Texas at San Antonio Educational Collaboration

Students enrolled in the Applied Statistics and Demography PhD program at UT San Antonio may apply to the UTHealth School of Public Health. Applicants will be reviewed for admission as non-degree students consistent with current policies and, if admitted, may attend classes at the San Antonio Campus. Students may take up to eight courses at UTHealth School of Public Health; all successfully completed courses will be credited toward the Applied Statistics and Demography PhD program at UT San Antonio.

APPLICATION PROCEDURES AND DEADLINE DATES

Completed applications for degree programs, with all supporting documents, must be received by:

October 1 – Spring semester priority deadline for scholarship consideration & final deadline

December 1 – Fall semester priority deadline for scholarship consideration

April 1 – Fall semester, all other applicants final deadline

Completed applications for certificate, non-degree programs and conditional admission, with all supporting documents, must be received by:

November 1 – Spring Semester

April 1 – Summer Session

July 1 – Fall Semester

Applicants will be notified by e-mail and mail of the Admissions Committee's decision within approximately 2-8 weeks of the date the application is completed and verified via SOPHAS, provided that all supporting materials are received by the application deadline.

Degree Program Application Procedures

Applications to all UHealth School of Public Health degree programs are received and processed by the centralized School of Public Health Application Service (SOPHAS). Applicants to dual degree programs apply to UHealth School of Public Health independently of the respective complementary dual degree program. The following contains the elements of the application materials required when submitting materials and the process for using the centralized application service, SOPHAS (<http://www.sophas.org/>). SOPHAS is intended to streamline the application process for applicants who intend to apply to multiple institutions as only one set of transcripts, reference letters, and standardized test scores needs to be submitted in support of the application. The application fee through SOPHAS is based upon a sliding scale determined by the number of schools to which the applicant is intending to apply. All the supporting documentation detailed below is required of those applicants submitting their applications through SOPHAS. Detailed instructions for submission of applications using SOPHAS are described in the SOPHAS link provided above. Official transcripts must be submitted directly to SOPHAS at the following addresses:

For regular mail, please send your transcripts to:

SOPHAS

P.O. Box 9111

Watertown, MA 02471-9111

For overnight delivery ONLY, please send your transcript(s) to:

SOPHAS c/o Liaison International

311 Arsenal Street Watertown, MA 02472

Phone: 617-612-2090

Application to degree programs must include:

- A completed application form. Applicants should describe their interests in public health in the essay/personal statement & objectives section of the application form. The essay should address educational goals specific to the chosen program of study. Applicants should also describe career goals as well as any experience relating to the health field, research, community service, and leadership positions. Experience in these areas may include work, internship, or volunteer

settings. Applicants are encouraged to describe how significant life experiences have influenced their motivation, qualifications, or academic record. This essay/personal statement & objectives is central to the admissions decision and is read by the faculty. (Each applicant will be reviewed by only one program.) Applicants should also indicate whether they will be full-time or part-time students.

- ****Note:** Personal statement & objectives are screened for plagiarism. Evidence of plagiarism will result in an automatic denial of admission.
- Evidence of proficiency in basic mathematical or other quantitative skills, documented through transcripts, publications, or a statement describing how this proficiency was achieved, or will be achieved, prior to enrollment.
- Payment of the SOPHAS application fee, according to the number of designations (schools) chosen.
- Official transcripts covering all periods of postsecondary enrollment in all accredited institutions of higher education attended. Applicants should request that all institutions attended send official (original) transcripts directly to SOPHAS at the addresses listed above. Copies of transcripts sent by the applicant are not considered. Transcripts must include both grades and credit hours. Foreign graduates are required to submit World Education Services (WES) evaluations of their transcripts to SOPHAS. Instructions can be found on the SOPHAS link provided in the “Degree Program Application Procedures” subsection. The school prefers a grade point average of at least 3.0 or higher on a 4.0 scale.
- Letters of recommendation from at least two persons qualified to evaluate the applicant’s academic or professional performance, ability, motivation, and character. Academic letters of reference are preferred. Letters should be on official letterhead.
- All international applicants must take the Test of English as a Foreign Language (TOEFL) or the International English Testing System (IELTS). Information and application booklets may be obtained by contacting the Educational Testing Service directly at <http://www.ets.org/toefl/> or <https://www.ielts.org/en-us>. This requirement applies even if you attended a graduate institution and earned only a Master’s Degree. A minimum acceptable score of 600 on paper-based TOEFL, 250 on computer-based TOEFL, or 100 on internet-based TOEFL is required for admission to our school. For IELTS, a minimum acceptable overall score of 7.5 is required for admission to our school. Test scores are valid for 2 years from the test date. Have the scores forwarded to SOPHAS using the reporting code 5688 (TOFEL). No department code is needed. Official IELTS scores meeting minimum requirement should be mailed to:

ATTN: Admissions
UTHealth School of Public Health
1200 Pressler Street, RAS E-201
Houston, TX 77030

- Exceptions to this requirement:
 4. If you are a Permanent Resident or Citizen of the United States
 5. If you earned a bachelor’s degree or doctoral degree from the United States
 6. Applicants’ country of origin from the following English-speaking countries may be exempted from submitting TOEFL/IELTS scores: Australia, Bahamas, Canada, Ireland, Jamaica, New Zealand, Trinidad and Tobago, Uganda, and United Kingdom.
- Exemptions on a case-specific basis for those applicants who do not meet the above criteria

Transcripts for an educational credential evaluation and determination of United States equivalency from applicants who hold degrees from institutions outside of the United States. The minimum requirement is to submit a credential evaluation that demonstrates the applicant holds, at a minimum, the equivalent of

a bachelor's degree. Course-by-course (ICAP) translation is required. This can be accomplished by submitting transcripts to:

World Education Services (WES)
Bowling Green Station
P.O. Box 5087
New York, NY 10274-5087
USA
(212) 966-6311
Email: info@wes.org
Website: <http://www.wes.org/>

The results of the evaluation must be submitted directly to SOPHAS by the evaluation agency.

- Graduate Record Exam (GRE) scores are required for all degree-seeking applicants and are reviewed by the Admissions Committee as one factor among others. Students applying to the MPH program may also submit Medical College Admissions Test (MCAT) scores in place of GRE scores. Applicants holding previous doctoral-level degrees from accredited U.S. or Canadian universities may request an exemption from the GRE/MCAT requirement. Applicants to dual degree programs that have a doctoral component (e.g., MD or JD) are exempted from the GRE requirement, provided they hold an offer of admission to the participating medical or law school. Applicants who hold an international medical degree and hold Educational Commission for Foreign Medical Graduates certification may request a waiver of the GRE requirement provided they are currently practicing medicine or in an active residency program in the United States at the time of applying.
- For GRE scores, a recommended combined score of 298 for masters programs and 308 for doctoral programs on the verbal and quantitative sections of the General Test is preferred. For the analytical writing section, a score of at least 4.0 on a scale of 6.0 is preferred. The GRE is administered at many universities across the United States and in many foreign cities. Information and application booklets may be obtained from any university admissions office or by writing to the Office of the Registrar at the address given below. Only scores received directly from Educational Testing Service will be considered. For MCAT Scores, a recommended total score of 500 is preferred. Only scores received directly from the American Association of Medical Colleges testing service will be considered. The GRE/MCAT is but one of several factors considered in the aggregate during the admissions process.
- Any published papers, reports, or other materials believed to provide information on an applicant's capability and performance should be included in the application. Instructions on how to append these materials to the SOPHAS application are included in the SOPHAS application instructions. Several programs require a writing sample (see application form; send copies only since the school is not responsible for returning this supplemental material). Alternatively, copies may be appended to the SOPHAS application.

ADMISSIONS PROCESS

Applicants are required to elect a single degree program located at a campus of UTHealth School of Public Health. The faculty or faculty subcommittee of the appropriate program and campus review each application and all supporting documentation. Their recommendations are then reviewed by the Office of the Senior Associate Dean for a final decision.

Factors believed to contribute to the academic success of students and their subsequent contributions to the knowledge base and practice of public health are considered in each admissions action. Applicants are evaluated under the following criteria, including their potential for success in the program to which they are applying. These criteria, and the material reviewed in evaluating each, include:

- Prior academic preparation (depth, breadth, and performance): application, college transcripts, letters of recommendation;
- Relevant work experience (particularly public health practice in or research related to underserved and vulnerable communities): application, essay/personal statement & objectives, letters of recommendation, CV/Resume;
- Educational goals (should be consistent with the chosen area of study): application, essay/personal statement & objectives, letter of recommendation;
- Career goals (especially the intent to practice public health in underserved and vulnerable communities): application, essay/personal statement & objectives, letters of recommendation;
- Motivation (description of any special obstacles or challenges that have been overcome to achieve goals thus far): college transcripts, essay/personal statement & objectives, letters of recommendation;
- Integrity: essay/personal statement & objectives, letters of recommendation;
- Community service (particularly service to diverse communities in need): application, essay/personal statement & objectives, letters of recommendation;
- Scores on GRE and TOEFL (if required); standardized tests; and
- Theses, publications, and other scholarly works: supplemental documents provided by applicant.

Applicants may be contacted for personal interviews, and prospective students are encouraged to visit the school and discuss their proposed program with faculty and staff.

Address application inquiries to:
UTHealth School of Public Health
Office of Academic Affairs and Student Services
ATTN: Admissions
1200 Pressler Street, E-201
Houston, TX 77030

Direct telephone inquiries to UTHealth School of Public Health at (713) 500-9032
(8:00 a.m. to 5:00 p.m., Central Standard Time)

E-mail inquiries to UTHealth School of Public Health may be directed to SPHAdmissions@uth.tmc.edu.

[applyUTH](#) is available for applicants to check on the status of their application and supporting documents. Enrolled students will use the myUTH portal to access their official grades, register for classes, view bills and pay fees, check on the status of financial aid applications, submit address changes, and request official UTHealth transcripts. myUTH can be accessed at <https://eportal.uth.tmc.edu>.

“Conditional Admission” to Doctoral Programs

With the exception of applicants admitted directly to the PhD in Biostatistics or Epidemiology programs (see next subsection), applicants to the doctoral programs are expected to hold a master’s degree in the relevant discipline. Applicants with a prior master’s degree but with deficits (i.e., no MPH or lack of master’s level discipline courses for a PhD), may be admitted with the conditions of completing required leveling courses. Once a student has completed the required leveling courses listed in the admissions letter, with a grade of at least a “B,” the conditions will be removed from the student’s record. Conditions must be met prior to the preliminary examination. Students who fail to complete the conditions will be discontinued from the doctoral program. Completed courses will appear on the transcript, but will not be applied toward the doctoral degree plan.

Leveling courses do not count towards the doctoral degree program. Credit hours toward a doctoral degree program’s graduation requirements begin to accrue at the time of admission to and enrollment into the degree program and courses as follows:

- No credit hours for the leveling courses will be applied toward a doctoral degree.
- DrPH students must have previous evidence of, or UTHealth School of Public Health course credit hours must include, all five core MPH courses.

Students should complete the petition for lifting conditional admission form and submit it to the Admissions Committee.

Direct Admission to a PhD Program

The Department of Biostatistics and Data Science may admit students holding a BA or BS degree directly into the PhD program. A student requesting direct admission to the PhD program is expected to have a bachelor’s degree that emphasizes the development of strong quantitative skills, such as degrees in mathematical, biomedical, or physical sciences. The successful applicant will have mastered multivariable calculus and linear algebra.

The Department of Epidemiology may admit students holding a BA or BS degree directly into the PhD program. A student requesting direct admission to the PhD program is expected to have either a bachelor’s degree that demonstrates the development of strong scientific and analytical skills, a professional doctoral degree in a medical field, or a doctoral degree in a field not directly related to medicine or public health that is coupled with evidence of adequate preparation in biological sciences and mathematics. In addition, evidence of academic achievement that includes completion of advanced courses in biological sciences, at least two semesters of college-level calculus (or the equivalent) and at least one course in statistics. All other requirements for admission to the PhD program as described above should also be met.

Transfer of External Credit Hours

UTHealth School of Public Health will accept transfer of credit hours for up to 9 semester graduate credit hours completed at another accredited U.S. institution* with a minimum grade of “B” and apply it towards the degree plan as follows:

- If the credit hours replace an MPH core course or requirement for a major, students must submit a syllabus and list the degree competencies that the course meets.
- If the credit hours replace an elective course, students must submit a syllabus and describe how the course meets the degree plan competencies.

- The transfer credit hours for the course(s) must be approved by the student’s advisor and the department chair or curriculum coordinator from the department offering the course to be replaced (if core course) and the Office of Academic Affairs and Student Services.

Course credit that is transferred must not have been counted toward another awarded degree. This policy applies to all students entering UTHHealth School of Public Health as of fall 2011. The transfer policy is not retroactive. Students will need to submit the Transfer of External Credit Form, which can be found on the Student Services website.

**Credits from foreign institutions are subject to appropriate credential review to satisfy a U.S. accredited course.*

All transfer credit policies can be found on the Academic Affairs webpage under the “Policies” tab.

Registration for Maximum Credit Hours in One Term

To promote successful progress and completion of all required courses in a degree program within the approved time limits, the Director of Academic Affairs and Student Services will review all requests to register for more than 16 credit hours in one term. Unique student circumstances may require students to enroll in numerous courses per term (dual degrees, occupational medicine, military status, etc.). Full-time status is considered if enrolled in at least nine (9) credit hours in the fall or spring semesters or at least six (6) credit hours in the summer session.

The 16-credit hours per term limit will be placed on all registering students via myUTH/Campus Solutions. Students who require more than 16 credit hours in any given term will be required to provide documentation from their academic advisor that supports and justifies the need to take more than 16 credit hours. This can be accomplished by requesting the academic advisor to send an email to the Director of Academic Affairs and Student Services.

Criminal Background Check

Entering students will be expected to consent to and pay for a criminal background check by an entity designated by the School. Failure to consent or pay for the background check and/or unsatisfactory results in the background check will result in withdrawal of acceptance.

TUITION AND FEES

Tuition and fees are subject to change and become effective on the date enacted. The Texas Legislature does not set the specific amount for any particular student fee. Student fees are authorized by state statute; the specific fee amounts and the determination to increase fees are made by the university administration and The University of Texas System Board of Regents.

Fees and Charges

Alternative Instruction Delivery Fee –	
SPH Web Course Delivered within Texas	\$50/per semester credit hour
SPH Web Course Delivered out of state	\$750/per semester credit hour
Application Fee	\$60
Computer Resource Fee	\$62/semester
Graduation Fee*	\$100
Information Technology Access Fee	\$36/semester
Installment Use Fee	\$20
Late Payment Fee	\$25
Liability Insurance –	
Fall Semester	\$5.25
Spring Semester	\$5.25
Summer Semester	\$4.00
Library and Writing Services Fee	\$60/semester
Portfolio Fee	\$50/semester
Service Exam Fee	\$50/semester per web-based course
Student Orientation Fee	\$50/semester
Student Records Fee	\$5/semester
Student Services Fee**	\$566.25 (full-time rate)
Supplemental Fee-Accelerated MPH Program-San Antonio	\$4000/semester

*A graduation fee of \$100 payable at registration for the final academic term is required of all students.

**The Student Services Fee, required of all students, provides for student health services, student counseling, student government, a shuttle service, and recreational facilities. The annual fee of \$566.25 is charged to students on a semester credit hour basis by semester. Breakdown of the fee is found on the Registrar's website under Tuition and Fee Schedule.

Health insurance is required of all UTHHealth students. If students have a health insurance policy, they may provide proof of comparable insurance to Auxiliary Enterprises no later than the 12th class to have this charge waived. Information regarding student health insurance can be found at this Auxiliary Enterprise website: <https://www.uth.edu/auxiliary-enterprises/insurance/index.htm>

The current Tuition and Fee Schedules for UTHHealth can be found on the Office of Registrar website at <https://www.uth.edu/registrar/current-students/registration/tuition--fee-schedule.htm>

Student Communication

E-mail accounts constitute the official mode of communication linking students, faculty, and/or administration. Consequently, students are responsible for maintaining the UTHHealth e-mail account assigned to them and activated upon payment of tuition and fees, and are responsible for regularly checking e-mail messages.

ACADEMIC TERM STRUCTURE

Letter codes **a, b, c, d** indicate the semester/summer session in which courses are offered. For example:

a	Course offered in the fall semester, 15 weeks
b	Course offered in the spring semester, 15 weeks
c	Course offered in the first half of the summer session (session I), 6 weeks
d	Course offered in the second half of the summer session (session II), 6 weeks
cd	Course offered for the full summer session, 12 weeks

Course credits equate with class hours per week per semester. For example, courses carrying four credit hours meet four (4) hours per week for a 15-week semester. Courses with shorter durations will have longer meetings.

Availability of courses is contingent upon sufficient registration.

Course Registration

When registering for coursework, students should be aware of the prefixes used for the numbered courses. All courses are graduate level courses. Some courses are offered as either master-level or doctoral-level. In those cases, doctoral students should select the doctoral-level offering. Students must register for the appropriate *class section* for their campus location. Students at any campus can register for web-based online courses. Students should also seek advice from their faculty advisor and refer to their degree planner when selecting coursework.

Course Prefix	Modality and Level
PH	Classroom; available to master and doctoral-level students
PHM	Classroom; available to master-level only students
PHD	Classroom; available to doctoral-level only students
PHW	Online; available to master and doctoral-level students
PHWM	Online; available to master-level only students
PHWD	Online; available to doctoral-level only students
Class Section	Students register for the <i>class section</i> that corresponds to their campus location.
100 – 199	Houston campus
200 – 299	Austin campus
300 – 399	Brownsville campus
400 – 499	Dallas campus
500 – 599	El Paso campus
600 – 699	San Antonio campus
700 – 749	Online courses; available to students at all campuses.
1000 and up	Reserved for independent studies, practicum, thesis and dissertation

Courses described in the following section are organized by department and are offered on a regular basis. The school also offers a wide variety of Special Topics courses that vary by semester and are designed to respond to current public health issues as well as to specific areas of faculty and student interest. The entire list of course offerings is included in the registration materials distributed each semester.

ACADEMIC DEPARTMENTS

Public health is an interdisciplinary field that focuses on a number of important issues, such as changing patterns of health associated with population and socio-demographic trends, influencing changes in behavior to reduce the risk of disease and to promote health, preserving an environment consistent with human health, and improving the organization and availability of health services for all segments of society. As an interdisciplinary, problem-centered field, public health requires an academic structure serving that fundamental idea.

UTHealth School of Public Health has four academic departments and five academic program areas that correspond to the five core disciplines of public health. The four departments are Biostatistics and Data Science; Epidemiology, Human Genetics, and Environmental Sciences; Health Promotion and Behavioral Sciences; and Management, Policy, and Community Health. Each department serves to bring teaching, research, and practice activities together conceptually, organizationally, and physically under the common umbrella of life-long learning.

Each department has research centers that focus and enhance areas of common, yet interdisciplinary research. The centers provide a forum for exchange of ideas and development of collaborative research. The research activities within the centers provide excellent opportunities for student involvement for meeting academic research requirements as well as for employment opportunities. Faculty members have a primary appointment in one of the four departments. Faculty members are able to affiliate with research centers and, thus, have secondary appointments in other departments. This encourages development of student and faculty capabilities and initiatives; promotes studies that are comprehensive; and encourages close, cooperative relations between individuals with different disciplinary backgrounds.

All students earn a public health degree. Departments include major and minor areas of study and provide breadth of knowledge and skills for all students. Students are expected to work with their advisors to develop a course of study and an academic plan geared to their individual educational and professional goals.

Course information is organized by course catalog numbers and can be found within their respective departments.

Course Numbers	Department
1600 – 1999	Biostatistics and Data Science
2500 – 2999	Epidemiology
2100 – 2499	Environmental and Occupational Health Sciences
1000 – 1499	Health Promotion and Behavioral Sciences
3000 – 3999	Management, Policy, and Community Health
5000 – 9999	Interdepartmental

BIostatISTICS AND DATA SCIENCE

Biostatistics is a discipline encompassing the study and development of statistical, mathematical, and computer methods applied to the biological and health sciences. Biostatisticians play a key role in the design, conduct, and analysis of research studies of health and disease. There is ample opportunity for experience in consulting and collaborative research. Alumni of the Biostatistics program are prominent in academia, industry, and government.

The Department of Biostatistics and Data Science offers the MPH, MS, and PhD degrees in Public Health with an emphasis in Biostatistics. The curriculum includes courses in applied and theoretical statistics, statistical computing, clinical trials, and statistical genetics.

Minor in Biostatistics

The department offers a minor course of study (nine (9) semester credit hours) for MS, DrPH, and PhD students who are majoring in other public health disciplines. Courses required for the minor include:

- Masters students: **PHM 1690** *Introduction to Biostatistics in Public Health*, **PH 1700** *Intermediate Biostatistics* and at least two Biostatistics electives above PH 1700
- Doctoral students: **PHM 1690** *Introduction to Biostatistics in Public Health*, **PH 1700** *Intermediate Biostatistics* and at least three Biostatistics electives above PH 1700

PH 1820 *Regression Techniques* is strongly recommended as an elective for all students.

Centers

The Coordinating Center for Clinical Trials (CCCT), located within the Department of Biostatistics and Data Science, has a mission to improve public health by providing leadership in designing, conducting, coordinating, and reporting large multicenter clinical trials for the prevention and treatment of disease and other medical conditions. Using a collaborative approach involving clinical trials, biostatistics, epidemiology, medicine, health services, and health promotion, the CCCT makes important contributions to medical, statistical, and clinical trials knowledge. The CCCT has played a leading role in cardiovascular disease and vision research by serving as a coordinating center for 16 nationwide multicenter clinical trials.

Master of Public Health (MPH) Degree Program

The MPH in Biostatistics is a minimum of 45 semester credit hours and designed to prepare students for positions that require a broad knowledge of public health as well as specialized knowledge of biostatistics. In particular, students will have the opportunity to learn applied biostatistical analysis, statistical theory, study design, data management, and ethics of research.

Special Entrance Requirements

Applicants to the MPH program should have strong quantitative skills and at least one (1) year of calculus. See the 'Application Process & Deadline Dates' and 'Admissions Process' sections for more information.

Course of Study

The following courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Biostatistics:

- MPH Core Courses: **PHM 1690**, **PHM 2612**, **PHM 3715**, **PHM 1110**, **PHWM 2110** & **PH 5015**
- Major courses: **PH 1700** *Intermediate Biostatistics*, and **PH 1820** *Regression Techniques*
- At least two courses from: **PH 1821** *Applied Multivariate Analysis for Biostatics*, **PH 1830** *Categorical Data Analysis*, or **PH 1831** *Survival Analysis*
- Biostatistics Electives
- Applied Practice Experience: **PH 9997** *Practicum*

- Integrative Learning Experience: *Capstone* or **PHM 9998 Thesis Research**

For a sample of the course of study for an MPH in Biostatistics, please see the degree planner at <https://sph.uth.tmc.edu/academics/degree-programs/master-of-public-health-mph/>.

Master of Science (MS) Degree Program

The MS in Biostatistics is a minimum of 36 semester credit hours and is generally a 2-year program for full-time students. Training is offered in research design, basic statistical theory, data analysis, computer applications, and statistical consultation. The program emphasizes fundamental statistical theory and methods and computational skills, and provides the basis for doctoral-level biostatistical studies.

Special Entrance Requirements

Applicants to the MS program should hold an undergraduate degree that emphasizes the development of strong quantitative skills through multivariate calculus and at least one semester of linear algebra. Examples are degree programs in mathematical, physical, biological, or social sciences. Advanced mathematical training and knowledge of computer programming are highly desirable. See the 'Application Process & Deadline Dates' and 'Admissions Process' sections for more information.

Course of Study

The following courses are required, except in the case of a waiver (waiver process varies by program), for an MS student majoring in Biostatistics:

- Leveling Courses: **PHM 1690 Introduction to Biostatistics in Public Health**; **PH 1700 Intermediate Biostatistics**
 - *Leveling courses do not count toward the credit-hour minimum for the degree.
- MS Core Courses: **PH 1820 Applied Linear Regression**; **PH 1821 Applied Multivariate Analysis**
- Major courses: **PH 1910 Probability and Distribution Theory**; **PH 1911 Statistical Inference**; **PH 1830 Categorical Data Analysis**; **PH 1831 Survival Analysis**
- Epidemiology Minor: **PH 2612 Epidemiology I** & 6-credits of epidemiology electives
- Biostatistics Electives
- **PHM 9998 Thesis Research**

For a sample of the course of study for an MS in Biostatistics, please see the degree planner at <https://sph.uth.tmc.edu/academics/degree-programs/master-of-science-ms/>.

Doctor of Philosophy (PhD) Degree Program

The PhD in Biostatistics is a minimum 48 semester credit hours and is generally a 4-year, full-time program beyond the MS degree or a 5-year, full-time program beyond the BA or BS degree. Graduates of the program are expected to prepare themselves to be independent investigators in the development and application of biostatistical analyses to problems of human health and disease. The PhD curriculum is designed to provide opportunities for students to prepare themselves to assume senior statistical posts in governmental or private health research agencies, or to follow careers in teaching and research.

Special Entrance Requirements

Applicants to the PhD program should have mathematical training beyond the introductory calculus level, including advanced calculus and linear algebra. Preference will be given to applicants with coursework in more advanced mathematics as well as statistics. They should hold degrees in areas that emphasize the development of strong quantitative skills, such as, degrees in mathematical, biomedical, physical, or social sciences. See the 'Application Process & Deadline Dates' and 'Admissions Process' sections for more information.

Direct Admission to the PhD Program

Applicants with a BS or BA degree (or foreign equivalent) in one of these areas with appropriate grounding in mathematics and statistics and who show promise for advanced studies may be admitted directly into the PhD program. Applicants with graduate degrees that are not in one of these areas who have the requisite statistical training may be admitted to the PhD program. All admissions require approval of faculty. The course of study for direct admission to the PhD requires completion of 72 credit hours.

Course of Study

The following courses are required, except in the case of a waiver (waiver process varies by program), for a PhD student in Biostatistics:

- Leveling Courses: **PHM 1690** Introduction to Biostatistics in Public Health; **PH 1700** *Intermediate Biostatistics*; **PH 1820** *Applied Linear Regression*; **PH 1910** *Probability and Distribution Theory*
*Leveling courses are not counted in the credit-hour minimum for the degree.
- Core Courses: **PH 1821** *Applied Multivariate Analysis for Biostatistics*; **PH 1830** *Categorical Data Analysis*; **PH 1911** *Statistical Inference*; **PHD 1915** *Linear Models I*; **PH 1988** *Biostatistics Seminar*
- Major Courses: **PH 1831** *Survival Analysis*; **PHD 1950** *Stochastic Processes for Biostatisticians I*
- One of the following courses to be completed in the first year: **PHM 2612** *Epidemiology I*; **PHD 3620** *Principles and Practice of Public Health*
- One breadth and one minor or two minors
- Biostatistics Electives
- **PHD 9999** *Dissertation Research*

At the end of the second year of doctoral study, students must satisfactorily complete a written preliminary examination in biostatistics. Upon successful completion of the preliminary examination, the student must form a dissertation committee, which will assist with the preparation of a research plan that demonstrates the capacity to conduct independent research in biostatistics. The research plan culminates in the completion, presentation in written form, and oral defense of an original research dissertation project that constitutes three publishable papers for journal submission. The dissertation or these three papers are expected to make a substantial contribution to knowledge in biostatistics.

For a sample of the course of study for a PhD in Biostatistics, please see the degree planner at <https://sph.uth.tmc.edu/academics/degree-programs/doctor-of-philosophy-phd/>.

Courses, Biostatistics and Data Science

PH 1624 *Introduction to SAS Data Management*

3 credits

This course covers reading ASCII files using various formats qualifiers, using DROP and KEEP statements, merging files, writing subsets of files, sorting, labeling variables, calculating date intervals, and using the LAG function. Minimal statistical processing, such as t tests and chi-squares, will also be introduced. Students are given several small coding assignments that are due approximately one (1) week later. To complete the assignments, students must have access to a computer on which SAS is installed.

PH 1625 *Intermediate SAS Data Management*

2 credits

This course presents a review of intermediate SAS programming techniques. Students will be presented with simulated programming tasks in lecture/Q&A sessions. They will then be given one (1) week to complete programming assignments demonstrating the new techniques. Group collaboration will be encouraged for problem-solving; however, each student must hand in an individual completed assignment. Every few weeks there will be an in-class programming assignment that must be completed individually. Occasional quizzes will be used to evaluate skill acquisition.

Prerequisites: PH 1624 or consent of instructor

PHM 1690 *Introduction to Biostatistics in Public Health*

4 credits

This course is designed as the first biostatistics course for students who have not previously taken a course in biostatistics; it is a designated core course for MPH students. Students will learn how to analyze quantitative data using appropriate biostatistical methods and software and interpret analysis results for a given public health context.

PH 1700 *Intermediate Biostatistics*

4 credits

This course is required for students minoring in Biostatistics and for students in Biostatistics who have not previously taken biostatistics courses. This course extends the topics covered in Foundations of Biostatistics to provide a deeper foundation for data analysis, particularly focusing on its application on research problems of public health and the biological sciences. Computer applications are included.

Prerequisites: PHM 1690 or equivalent knowledge/training.

PH 1745 *Sampling Techniques*

3 credits

This course introduces the principles and current practices of survey sampling with health-related applications. Topics include basic concepts and practical issues in statistical sampling; design and analysis for common sample designs, including simple random sampling, stratified random sampling, systematic sampling, cluster sampling, and multistage sampling; and analytic issues concerning the use of complex survey data, such as the National Health and Nutrition Examination Survey.

Prerequisites: PH 1700 or consent of instructor

PH 1820 *Regression Techniques*

3 credits

The course emphasizes the design, implementation, analysis, and reporting of research investigations. Topics include two-sample inference using t-distributions, robustness and resistance, alternatives to the t-test based analyses, comparisons among several samples, linear combinations and multiple comparisons, simple and multiple linear regression methods, regression diagnostics, variable selection, and related methods. The course requires intensive computer analyses of case studies, emphasizing graphics and proper use and interpretation of statistical software packages using Stata as a model statistical software package.

Prerequisites: PH 1700 or consent of instructor

PH 1821 *Applied Multivariate Analysis for Biostatistics*

3 credits

This course is a continuation of PH 1820. Topics include the analysis of variance for two-way classifications, factorial arrangements and blocking designs, analysis of repeated measures and other multivariate responses, exploratory tools for summarizing multivariate responses, logistic methods for binary response variables and binomial counts, and log-linear regression for Poisson counts.

Prerequisites: PH 1820 or consent of instructor, linear algebra and PH 1911

PH 1830 *Categorical Data Analysis*

3 credits

This course presents the theory and applications of categorical data analysis. Topics include contingency tables, applied generalized linear models, logistic regression model, sampling methods, model building

strategies, assessing model fit, conditional logistic regression for matched analyses, polychotomous logistic regression, and Poisson regression.

Prerequisites: PH 1700 and calculus or consent of instructor

PH 1831 *Survival Analysis*

3 credits

This course presents the theory and applications of survival analysis. Topics include censoring, parametric and nonparametric models, hypothesis testing, proportional hazards model with fixed and time-varying covariates, model building strategies, and assessing model fit.

Prerequisites: Calculus and either PH 1830 (preferred) or PH 1820, or consent of instructor

PH 1835 *Statistical Methodology in Clinical Trials*

3 credits

This course covers the use of current statistical methodology in the design, execution, and analysis of clinical trials. Some of the topics include basic study design, randomization, sample size issues, data analysis issues, and interim monitoring.

Prerequisites: PH 1700 and calculus, or the consent of instructor

PH 1840 *Statistical Methods for Handling Missing Data*

3 credits

This course covers the use of current statistical methodology for handling missing data in health research studies. Primary emphasis will be given to population-based studies using surveys and secondary emphasis will be given to clinical-based studies, e.g. clinical trials, where dropout is commonly present. Some of the topics include missing data patterns, single imputation methods, estimation of imputation uncertainty, likelihood-based methods, multiple imputation, selection models, pattern-mixture models, shared-parameter models, and sensitivity analysis.

Prerequisites: PH 1700 or the consent of instructor

PHD 1855 *Distribution-Free Methods*

3 credits

This doctoral-level course introduces the theory and applications of distribution-free (non-parametric) statistical methods. Topics include properties of distribution functions, K-S tests, runs tests, rank sum tests, non-parametric analysis of variance, rank correlation, contingency table analysis, and distribution-free confidence intervals.

Prerequisites: PH 1700

PHD 1861 *Introduction to Meta-Analysis*

1 credit

This is an intensive introductory course and the 3rd section of PHD 1431. The full 3 credit course is designed to introduce students to best practices, resources, and methods for systematic reviews and meta-analyses, and to guide students through the steps of a systematic review. STATA will be used throughout the meta-analysis course. This course meets on an intensive schedule for 2 weeks of the 6 weeks that is a part of the PHD 1431 course. If you will be taking both courses, you must register for both courses separately.

PH 1910 *Probability and Distribution Theory*

3 credits

This course covers probability theory, distributions of discrete and continuous random variables, mathematical expectation, moments and moment generating functions, distribution of transformed variables, limiting distributions, and estimation. Theoretical results are applied to selected research problems in public health and the biomedical sciences.

Prerequisites: Working knowledge of differential and integral calculus

PH 1911 *Statistical Inference*

3 credits

This course is a continuation of PH 1910. Topics include statistical hypothesis tests, LR tests, Bayes tests, noncentral distribution and power, selected non-parametric tests, sufficiency, completeness, exponential family, and the multivariate normal distribution. Theoretical results are applied to research problems in public health and biomedical sciences.

Prerequisites: PH 1910 or consent of instructor

PHD 1915 *Linear Models I*

3 credits

This doctoral-level course introduces the fundamentals of linear statistical models for students with preparation in statistical theory and methods. Using matrix algebra, distributions of quadratic forms are presented and used to develop the general linear model for multi-factor data. Topics include estimation and hypothesis testing in the full rank model, estimability, and statistical inference in the less than full rank model. Theory and computation are emphasized.

Prerequisites: PH 1911 or consent of instructor

PH 1916 *Generalized Linear Models*

3 credits

This course focuses on methods for generalized linear models (GLMs), not on the use of software for data analysis with GLMs. Emphasis will be placed on statistical modeling, building from standard normal linear models, extending to and going beyond GLMs, and going beyond GLMs. The main subject areas are logit models for nominal and ordinal data, log-linear models, models for repeated categorical data, generalized linear mixed models and other mixture models for categorical data. Methods of maximum likelihood, weighted least squares, and generalized estimating equations will be used for estimation and inference. The course focus will be on theory, but examples of application will also be presented.

Prerequisites: PH 1910 and PH 1911

PHD 1918 *Statistical Methods in Correlated Outcome Data*

3 credits

This doctoral-level course presents extensions of general and generalized linear models to correlated outcome data. Such models arise from hierarchical designs such as longitudinal studies or sample surveys. Major topics include mixed linear models for continuous, binomial, and count data; maximum likelihood estimation; generalized estimating equations; REML, EM algorithm; current general and specialized software applicable to these methods; and readings from current statistical literature. This course is intended for students with a background in linear models.

Prerequisites: PH 1916 or consent of instructor

PH 1920 *Advanced Categorical Data Analysis*

3 credits

This course covers approaches of maximum likelihood, weighted least squares, and generalized estimating equations applied to the analysis of contingency tables and other categorical outcomes. It emphasizes the formulation of hypotheses and hypothesis testing through generalized linear models. Special Topics include the analysis of matched case-control studies, repeated measurements, and clustered categorical data. Computer programs from SAS are used in the analysis of the data.

Prerequisites: PH 1911 or consent of instructor

PHD 1930 *Statistical Computing*

3 credits

This doctoral-level course consists of two parts. Part 1 covers programming and other computer skills required for the research and application of statistical methods. The focus will be on programming in the R language. Other computing topics covered are Unix/Linux, Emacs, LaTeX, R graphics, culling C code from R, writing R package, running simulation in statistical research, using high-performance computing cluster, and best coding practices. Part 2 covers the theory and application of common algorithms used in statistical computing. Topics include root finding algorithms, optimization algorithms, numerical integration methods, EM algorithm, importance sampling, rejection sampling, Gibbs sampling, Markov chain Monte Carlo (MCMC), bootstrapping, jackknife, and permutation test.

PHD 1950 *Stochastic Processes in Biostatistics I*

3 credits

This doctoral-level course covers the application of stochastic processes to problems in the biological and health sciences. Topics include discrete-time Markov chains; discrete-time branching processes; random walks; estimation of parameters in discrete-time Markov chains with complete or partially observed data; test of the Markov property and test of stationarity; time-reversible Markov chains; basic theory of Markov chains; Monte Carlo methods and its applications; and Poisson processes. Recent developments in related areas and their applications will be explored. Basic statistical theory, especially the estimation methods and EM algorithm, will be reviewed.

Prerequisites: PH 1911 and a thorough knowledge of calculus

PHD 1951 *Stochastic Processes in Biostatistics II*

3 credits

This course is a continuation of PHD 1950. This course briefly reviews differential equations and partial differential equations, but it mainly covers several models of continuous-time Markov processes that include the Poisson process, the Yule process, the birth-and-death process, the epidemic process, the queuing process, the illness-death process, and other stochastic models in public health. Statistical inference for some of these models will also be explored. The appropriate data using these models will be analyzed. Applications of counting processes and the concept of Martingale theory to other statistical methods including survival analysis will be introduced. Brownian motion will be briefly discussed.

Prerequisites: PHD 1950 or consent of instructor

PHD 1960 *Time Series Analysis*

3 credits

This doctoral-level course covers the uses, descriptions, and analyses of time series models. Methods are developed for fitting models to time series data, and using the fitted models for forecasting future values of the series, as well as for adjusting concomitant variables to control future values of the series. The course also covers spectral and cross spectral methods for analyzing time series data, and sampling distributions of model parameters and of future forecasts. Univariate models are generalized to the case where more than one observation is taken at each time period.

Prerequisites: A course in theoretical statistics or consent of instructor

PHD 1965 *Bayesian Data Analysis*

3 credits

This doctoral-level course examines basic aspects of the Bayesian paradigm including Bayes theorem; decision theory; general principles (likelihood, exchangeability, de Finetti's theorem); prior distributions (conjugate, non-conjugate, reference); single-parameter models (binomial, Poisson, normal); multi-parameter models (normal, multinomial, linear regression, general linear model, hierarchical regression); inference (exact, normal approximations, non-normal iterative approximations); computation (Monte Carlo, convergence diagnostics); and model diagnostics (Bayes factors, posterior predictive checks).

PH 1975 *Introduction to Data Science*

3 credits

This course will cover data structure, foundations of algorithms, object-oriented programming in R and Python, research design, question formulation, data collection, relational database, graph database, data storage, data management, data processing, data query and retrieval, data visualization, report preparation, and exploratory analysis techniques.

Prerequisites: PHM 1690 and previous knowledge of linear algebra, linear regression, and basic knowledge of computer programming.

PH 1976 *Fundamentals of Data Analytics and Predictions*

3 credits

This course introduces modern statistical methods and computational algorithms and tools for big data analysis including descriptive statistics, sampling technique, regression learning, clustering, and classification (e.g., support vector machine, tree-based methods). Students will be introduced to the basic concepts behind data science. Hands-on sessions will familiarize students with the details and use of the most commonly used online tools and resources.

Prerequisites: PH 1700 or the equivalent; PH 1975; and calculus, linear algebra, basic statistical theory and convex optimization methods at the introductory level.

PH 1980 *Introduction to Genomics and Bioinformatics*

3 credits

This course introduces basic concepts, statistical methods, and computational algorithms and tools for the creation and maintenance of databases of biological information, DNA sequence analysis, modeling of evolution, genetic studies of complex diseases including linkage analysis, linkage disequilibrium and association studies, gene expression data analysis, and identification of biological networks. Students will be introduced to the basic concepts behind Bioinformatics and Computational Biology tools. Hands-on sessions will familiarize students with the details and use of the most commonly used online tools and resources. [Cross-listed with GSBS GS110032]

Prerequisites: Calculus, statistics, and consent of instructor

PH 1982 *Evolution of DNA and Protein Sequences*

3 credits

This course provides basic principles for understanding factors that govern the evolution of DNA and protein sequences. Students will be provided with the opportunity to learn about the formation and evolution of multigene families and other evolutionary phenomena. They will also be introduced to statistical methods and computer programs for analyzing DNA and protein sequence data. There will be computer demonstrations of some topics. The application of these principles and methods to genome-wide epidemiology will be discussed. [Cross-listed with GSBS GS110103]

Prerequisites: Calculus, statistics, and consent of instructor

PH 1984 *Population Genetics*

3 credits

This course is designed to help students to understand the fundamentals of theoretical population genetics and to be able to apply such knowledge in analyzing DNA samples from a population. Students will learn (1) to understand allele frequency and how it is affected by various evolutionary forces; (2) to understand linkage disequilibrium and dynamics, and be able to apply theory for analyzing linkage disequilibrium pattern in natural populations; (3) to understand the fundamentals of quantitative genetics and be able to apply to the study of important traits in humans; and (4) to understand the fundamentals of coalescent

theory and statistical properties of some fundamental summary statistics, and be able to apply these to natural populations. [Cross-listed with GSBS GS110042]

Prerequisites: Genetics, statistics, and consent of instructor

PH 1985 *Data Mining and Statistical Learning*

3 credits

This course covers applications of various novel data mining, machine learning, and artificial intelligence methods to the data analysis of large and complex datasets. Among other methods, feature construction and feature set reduction, classification, clustering and ROC analysis will be detailed.

PH 1986 *Introduction to Statistical Genetics*

3 credits

This course is designed to help the student understand various situations in which significant interplay between statistics and genetics is fundamental. Specifically, at the end of the course, students should be able to: (1) describe the fundamental principles and theory in some areas of genetics/biomedical science in which statistics plays important roles; (2) apply some widely used statistical methods and approaches for answering specific genetic questions; and (3) be ready for more advanced courses in the area of statistical genetics. [Cross-listed with GSBS GS11 1113]

Prerequisites: Consent of instructor

PH 1988 *Biostatistics Seminar*

1 credit

The seminar in biostatistics consists of presentations from guest speakers and some students who are working on doctoral dissertation research. It will provide an overview of various topics of current importance in the field of biostatistics and public health while emphasizing the mathematical and statistical tools needed to address these issues.

PHD 1997 *A Teaching and Learning Experience for Doctoral Students in Biostatistics*

1 credit

This doctoral-level course provides doctoral students in Biostatistics with an overview of the application of teaching methods in biostatistics. The objectives for this class are: (1) Apply teaching methods learned in the course, for example, through presentations on modern statistical topics, and/or via their role as teaching assistants (TAs) in Biostatistics courses; (2) Develop group leadership and teaching skills; and (3) Monitor and improve presentation skills. The student will receive instruction and feedback on their group leadership and teaching skills from faculty. Students will discuss the problem-based learning case studies based on examples provided and on their own teaching experiences. This is a required course for all PhD students in Biostatistics.

PH 1998 *Special Topics in Biostatistics*

Credit hours vary among Special Topics courses

Special Topics courses vary each semester and provide coverage of biostatistical theory and applications.

PH 1999 *Independent Study in Biostatistics*

1-9 credits

A plan of study is determined for each participating student, and supervised by a member of the Biostatistics faculty. In general, courses of independent study are not recommended unless a student has completed the appropriate introductory courses in biostatistics or presents evidence of experience in the field of biostatistics. This course may be repeated for credit. All independent study courses are required to have learning objectives and an outline of learning activities.

EPIDEMIOLOGY, HUMAN GENETICS AND ENVIRONMENTAL SCIENCES

Epidemiology, Human Genetics and Environmental Sciences (EHGES) includes a broad group of sciences. Epidemiology is one of the basic sciences of public health. Epidemiologists play a vital role in disease prevention through their study of determinants and patterns of disease in vulnerable populations. Human genetics research involves locating and characterizing genes underlying chronic diseases, such as coronary heart disease and diabetes. Geneticists are responsible for characterizing the extent and utility of DNA variation within and among populations, and how this variation has an impact on the health of individuals, families and populations. Environmental science research involves studying the air people breathe, the water people drink, and the environment where people live and work. Environmental and occupational health scientists study physical, biological, and chemical exposures encountered by the public to provide solutions to natural and man-made problems in the environment.

The academic programs for EHGES are divided into two areas: Epidemiology and Environmental and Occupational Health Sciences (EOHS).

EPIDEMIOLOGY

Epidemiology is the study of patterns of disease and injury in human populations and the application of this study to the control of health problems. With its focus on disease causation and prevention, epidemiology is a fundamental science of both preventive medicine and public health. In addition to having specific research activities, the Epidemiology faculty interacts closely with colleagues in government and industry, in clinical institutions in the Texas Medical Center, in community agencies, and with international organizations to provide a broadly based research and learning environment for students.

Epidemiology offers the MPH, MS, and PhD degrees in Epidemiology. The curricula of these degree programs are based on instruction in epidemiological principles, concepts and methods, with an emphasis on the application of this knowledge. Students are encouraged to include interdisciplinary coursework, independent research, and practical public health experiences within their academic plan.

Minor in Epidemiology

The department offers a minor course of study (nine (9) semester credit hours) for MS and doctoral students majoring in other public health disciplines. Courses required for the minor include:

- Masters students: **PHM 2612** *Epidemiology I* & two Epidemiology electives
- Doctoral students: **PH 2615** *Epidemiology II*, **PH 2710** *Epidemiology III* & one Epidemiology elective

Centers

The Department of Epidemiology is home to three centers: Center for Infectious Diseases (CID), Human Genetics Center, and Southwest Center for Occupational and Environmental Health. The mission of the CID is to address public health concerns of the citizens of the state of Texas by providing infrastructure and administrative support for multidisciplinary and coordinated research, teaching, and community service programs; to foster epidemiological and biomedical research and training in infectious diseases; and to encourage international collaborative research efforts addressing infectious disease problems of mutual concern. The mission of the Human Genetics Center is to understand the genetic etiology of the most common chronic diseases, including cardiovascular disease, diabetes, and various vision disorders. This objective is pursued and accomplished in multiple human populations. The mission of the Southwest Center for Occupational and Environmental Health is to conduct research in occupational and environmental health (OEH); to provide continuing education and outreach to the community, OEH professionals, and other stakeholders; and to offer graduate-level training opportunities in relevant OEH disciplines. The Hispanic Health Research Center, based at the Brownsville Campus, is also affiliated with

the Department of Epidemiology, Human Genetics and Environmental Sciences. The program focuses on obesity and diabetes research and prevention, particularly the impact on mental health and infectious diseases.

Master of Public Health (MPH) Degree Program

The MPH in Epidemiology is a minimum of 45 semester credit hours and designed to provide a breadth of achievement in the five core disciplines of public health, as well as additional knowledge and skills in epidemiology. The goal of this program is to prepare students to put epidemiologic concepts and methods into public health practice, conduct research studies in public health, and interpret scientific evidence relevant to public health.

Special Entrance Requirements

Applicants to the MPH program should hold a bachelor's degree in the biomedical or social sciences from a regionally accredited university or school. Experience in public health practice is also considered favorably. See the 'Application Process & Deadline Dates' and 'Admissions Process' sections for more information.

Course of Study

The following courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Epidemiology:

- MPH Core: **PHM 1690, PHM 2612, PHM 3715, PHM 1110, PHWM 2110 & PHM 5015**
- Major Courses: **PH 2615 *Epidemiology II*, PH 2710 *Epidemiology III* & PH 1700 *Intermediate Biostatistics***
- Electives; at least two courses must be Epidemiology courses
- Integrative Learning Experience: *Capstone* OR **PHM 9998 *Thesis Research***
- Applied Practice: **PH 9997 *Practicum***

For a sample of the course of study for an MPH in Epidemiology, please see the degree planner at <https://sph.uth.tmc.edu/academics/degree-programs/master-of-public-health-mph/>.

Master of Science (MS) Degree Program

The MS in Epidemiology is a minimum of 36 semester credit hours and is a research degree designed to provide an understanding of epidemiologic concepts, theories, and methodology. To a large extent, this degree program will be arranged by each student, in consultation with the advisory committee, in order to meet the student's specific educational goals. Adequate understanding of human diseases, including their natural history, etiology, pathogenesis, and prevention or control, may require moderate or advanced preparation in related laboratory or environmental sciences. Students are encouraged to draw upon outside resources (academic, governmental, clinical, etc.) in order to acquire knowledge and skills requisite to their specific educational goals.

Special Entrance Requirements

Applicants to the MS program should hold a bachelor's degree in the biomedical, physical, or social sciences from a regionally accredited university or school, or have several years of practical experience in epidemiologic or related work. GRE scores are required. See the 'Application Process & Deadline Dates' and 'Admissions Process' sections for more information.

Course of Study

The following courses are required for an MS student majoring in Epidemiology:

- Major Courses: **PHM 2612 *Epidemiology I*; PH 2615 *Epidemiology II*; PH 2710 *Epidemiology III*; PHM 2720 *Epidemiology Proposal Development***

- Required Courses: **PHM 1690** *Introduction to Biostatistics in Public Health* & **PH 1700** *Intermediate Biostatistics*
- Minor from another department
- Electives; at least two courses must be Epidemiology courses
- **PHM 9998** *Thesis Research*

For a sample of the course of study for an MS in Epidemiology, please see the degree planner at <https://sph.uth.tmc.edu/academics/degree-programs/master-of-science-ms/>.

Doctor of Philosophy (PhD) Degree Program

The PhD in Epidemiology is a minimum of 48 semester credit hours and represents outstanding scholarly achievement, i.e., a mastery of epidemiologic concepts, theories, and methodology; and a significant capacity for independent research. Students in the PhD program prepare themselves to become independent epidemiologic investigators and also will acquire some teaching experience. All students must complete the PhD program requirements within seven (7) years.

Special Entrance Requirements

Applicants to the PhD program should hold an MS or MPH in Epidemiology from a regionally accredited university or college or have other accomplishments, which indicate readiness for doctoral study in epidemiology. GRE scores are required. See the ‘Application Process & Deadline Dates’ and ‘Admissions Process’ sections for more information.

Direct Admission to a PhD Program

Applicants with a BA or BS degree (or foreign equivalent) may be directly admitted into the PhD program. Applicants requesting direct admission into the PhD program should have a bachelor’s degree that emphasizes the development of strong scientific and analytical skills. Applicants should also provide evidence of solid academic achievement, including successful completion of advanced courses in a biological science and two semesters of college-level calculus courses, as well as demonstrated oral and written communication skills. The course of study for direct admission to the PhD requires completion of 72 credit hours. See “Application Procedures and Deadline Dates” section for a list of required application materials, and “Admissions Process” section for factors considered in the admission decision.

Course of Study

Students pursuing a PhD in Epidemiology are required to select one disciplinary minor area of study and one defined breadth area of study or two minor areas of study. While the breadth may be selected from among the areas of study offered by the Department of Epidemiology, Human Genetics and Environmental Sciences, the other must be chosen from a different department. For example, a student might minor in biostatistics and develop a breadth area of study in genetics.

The following courses are required for a PhD student majoring in Epidemiology:

- Major courses: **PHD 2711** *Epidemiology IV*; **PHD 2712** *Experimental Methods in Epidemiology*; **PHD 2770** *NIH Proposal Development* OR **PHD 2720** *Epidemiology Proposal Development*; **PHD 2990** *Epidemiology Seminar*; **PH 1830** *Categorical Data Analysis* AND/OR **PH 1831** *Survival Analysis*
- Required course: **PHM 2612** *Epidemiology I*
- One breadth and one minor or two minors
- Elective courses, at least one course must be an Epidemiology course
- **PHD 9999** *Dissertation Research*

For a sample of the course of study for a PhD in Epidemiology, please see the degree planner at <https://sph.uth.tmc.edu/academics/degree-programs/doctor-of-philosophy-phd/>.

The preliminary examination is designed to test both the student's depth of knowledge in the major area of study and the student's ability to conceive and conduct independent epidemiologic research. The preliminary examination is given by this department at least once per year. The student must be enrolled during the semester the preliminary examination is taken. Successful completion of the preliminary examination (and dissertation proposal defense) converts the doctoral student to a doctoral candidate.

There are five courses required before the student may take the preliminary examination. These courses can be taken in two semesters, so a doctoral student may sit for the preliminary exam at the end of two semesters of study. The five courses are: PH 2710, PHD 2711, PHD 2712, PH 1830 or PH 1831, and one elective course in epidemiology. After the examination, the student should take PHD 2770 or PHD 2720 and other courses specific to the student's research agenda, including three courses in their declared minor and three courses in their declared breadth.

Courses, Epidemiology

PHM 2612 *Epidemiology I*

3 credits

This course provides a strong foundation in concepts, principles, and methods specific to epidemiology. By the end of this course, students should be able to apply these skills to (a) assess the health of a population; (b) describe the natural history, distribution, and determinants of health-related states and events; and (c) evaluate programs designed to improve public health. To accomplish this, the course considers epidemiology in the context of core public health functions and services.

PH 2615 *Epidemiology II*

3 credits

This course focuses on the principles and activities necessary to carry out information collection that is implemented and managed in an ethical manner consistent with the principles of the scientific method. This course addresses practical aspects of epidemiologic research. Systems theory, epidemiologic methods, principles of survey research, operations research methods, and computer uses in research are covered. The final product from the class is the development of an epidemiologic field "Manual of Procedures" for a study.

PH 2615 *Epidemiology II* and PH 2710 *Epidemiology III* can be taken interchangeably.

Prerequisites: PHM 2612 (or PHM 2610) or equivalent and PH 1700 (or PHM 1690)

PH 2710 *Epidemiology III*

3 credits

This course covers advanced concepts in epidemiologic methods with an emphasis on observational studies. Topics include causal inference, measures of disease frequency, measures of association, study design, precision and validity in epidemiologic studies, introduction to stratified and logistic regression analysis, concepts assessing effect modification and confounding, interpretation of epidemiologic study results, and manuscript development.

PH 2615 *Epidemiology II* and PH 2710 *Epidemiology III* can be taken interchangeably.

Prerequisites: PHM 2612 (or PHM 2610), PHM 1690 and PH 1700 or equivalent

PHD 2711 *Epidemiology IV*

3 credits

This course prepares students to use and make reasonable inferences regarding causality from epidemiologic data analyses. Students address research questions using data from a variety of study designs. Students acquire hands-on experience with stratified analysis, logistic regression, and survival

analysis. Other learning activities cover meta-analysis, advanced issues in assessment of confounding and effect measure modification, strategies for building multivariable models, and sensitivity analysis.

Prerequisites: PH 2615, PH 2710, and PH 1700 or consent of Instructor

PHD 2712 *Experimental Methods in Epidemiology*

3 credits

This course equips students to evaluate and interpret evidence concerning preventive or therapeutic measures, especially those recommended for public health application. It concerns principles and methods of experimental studies in epidemiology and public health, from simple clinical trials to prevention trials in multiple communities. Applications span diverse areas, including cardiovascular diseases, cancer, and infectious diseases. Students participate actively in a seminar format, critique published reports, and undertake a collaborative project to develop a research protocol for an experimental study.

Prerequisites: PH 2710 or consent of instructor

PHM 2720 *Epidemiology Proposal Development*

3 credits

PHD 2720 *Epidemiology Proposal Development*

3 credits

This course covers the structure and content of a student thesis research proposal, scientific writing conventions, critical evaluation and synthesis of epidemiological literature, development of specific aims and research methods, and procedure for writing and editing research proposals. Doctoral students will also cover NIH grant applications and the NIH grant review process.

Prerequisites, PHM 2720: PHM 2612L or equivalent

PH 2725 *Neuroepidemiology*

2 credits

This course provides an overview of the risk factors for a variety of neurologic and neuropsychiatric diseases, including stroke, Alzheimer's disease and other dementias, Parkinson's Disease, mental retardation, autism, and affective disorders. Areas covered include a description of the prevalence, incidence, mortality, risk factors, and etiologic mechanisms of these diseases and conditions. Students will gain an understanding of the impact of these diseases on public health; of the unique methodological issues associated with epidemiologic and genetic studies of these diseases; and of the basic pathobiology and clinical aspects of these disorders. The course aims to aid students' comprehension of published literature in neuroepidemiology and neurogenetics.

PH 2730 *Epidemiology and Control of Infectious Diseases*

3 credits

This course introduces epidemiologic aspects of infectious diseases and provides information regarding prevention and control of these diseases. At the end of the course, students have an understanding of the epidemiologic aspects of infectious diseases including incidence, distribution, and pattern of disease occurrence as well as different modes of transmission and associated risk factors. They should understand the importance of surveillance systems in detecting epidemics, the application of epidemiological methods to determine the risk and associated factors, and the significance of prevention and control programs for infectious diseases. Students gain knowledge and skills in carrying out epidemic investigations through a series of case study assignments.

Prerequisites: PHM 2612 (or PHM 2610) or consent of instructor

PH 2731 *Genetic Epidemiology and Infectious Disease*

3 credits

This course is intended for students who have not had significant training in genetics. It will cover basic genetics, medical genetic terminology, and the associated scientific and medical literature. At the end of the course, students will have an understanding of the genetic aspects of infectious diseases, including the contribution of host genetics and genes influencing susceptibility to infectious diseases. They will understand the importance of environment, host and pathogens genetic factors and their mutual interactions influence on the ratio between clinical and subclinical disease. Evaluations will be based on examinations given in the class and attendance.

PH 2735 *Physical Activity and Health: Epidemiology and Mechanisms*

3 credits

This course presents evidence that exercise training and physical activity can prevent disease and increase the quality of life. The course covers heart disease, hypertension, diabetes, obesity, osteoporosis, eating disorders, cancers, immune system, and aging, as well as inter-relationships among and between these conditions. Each section starts with the physiology basis for the disease, and the epidemiologic evidence that exercise training and physical activity will reduce the risk of developing the disease. Then, cross-sectional and longitudinal studies are presented supporting the epidemiological data. Finally, studies are presented that focus on the mechanisms by which exercise and physical activity prevents the development of the disease, and, in some cases, how it can improve the disease state.

PHW 2740 *Cardiovascular Disease Epidemiology and Prevention*

3 credits

This course provides an overview of the field of cardiovascular disease (CVD) epidemiology. Topics include the pathophysiology of CVD, CVD survey methods, trends in CVD mortality and morbidity, CVD risk factors, major strategies for CVD prevention, and a summary of major CVD clinical trials. Students will gain an understanding of the impact of CVD on public health.

Prerequisites: PHM 2612 (or PHM 2610) or consent of instructor

PHM 2745 *Cancer Epidemiology*

3 credits

This primarily introductory-level course reviews the causes of cancer and the epidemiology of cancer by anatomical site. The course will introduce seminal studies and current issues in cancer epidemiology, and will cover basic concepts pertinent to cancer epidemiology research including biology, pathology, statistics, classic and novel risk factors, prevention, and genetics. Selected publications from epidemiologic literature provide opportunity for student-faculty discussion.

PHW 2750 *Disease: Natural History, Prevention, Control*

3 credits

This course is intended for students who have not had significant training in biology. It will cover common diseases, medical terminology, and the associated scientific and medical literature. The course will consist predominantly of online "lectures," readings, and discussion board participation. Objectives include attaining a basic understanding of the biological basis of health and of disease processes; developing a vocabulary of medical terminology that will enhance the student's ability to read and comprehend public health literature; and developing an understanding of common human diseases and their importance in a public health context. The grade is based on participation, assignments, a mid-term examination, and research project.

PH 2755 *Nutrition Research Methods*

2 credits

This course teaches basic epidemiologic research skills applied to nutrition. Students complete training for UHealth School of Public Health on-line library databases and the Academy of Nutrition and Dietetics

(AND) Evidence Analyses Process (EAP). Students learn to create and score evidence tables using the EAP. Students develop a brief nutrition research proposal with an objective, literature review, methods section, and dummy tables and graphs. Students learn techniques for effective PowerPoint presentations and deliver an oral presentation of their individual project.

Prerequisites: Enrollment in Dietetics Internship, consent of instructor

PHWM 2760 Occupational Epidemiology

3 credits

PHWD 2760 Occupational Epidemiology

3 credits

This course describes the types and magnitude of workplace injuries and illnesses, which exact a large human and economic toll on adult and child workers in the United States and worldwide (many, if not most, of these adverse health outcomes are preventable); examines the epidemiologic methods used to identify risk factors for these events; and examines the role of academia, industry and public health practice in understanding and controlling these conditions from an epidemiologic perspective. The course is especially targeted as a Special Topics course for epidemiology majors and to provide an epidemiologic and public health perspective to occupational health for occupational health, environmental science and other interested students.

Doctoral students will have additional projects.

Prerequisites: PH 1700 or PHM 1690, and PH 2612 or PHM 2610

PHM 2762 Environmental Epidemiology

3 credits

PHD 2762 Environmental Epidemiology

3 credits

This course is designed to introduce students to specific research areas within the field of environmental epidemiology as well as to epidemiologic and exposure assessment methodologies commonly used in the field. The course provides an introduction to selected topics and concepts in environmental epidemiology and will prepare students to critically appraise the environmental epidemiologic literature. Topical areas may include (but are not limited to) air pollutants, persistent organic pollutants, pesticides, metals, environmental disasters, and environmental justice.

Prerequisites: PH 2610 or PH 2612, and PHM 1690

PH 2765 Pediatric Epidemiology

3 credits

This course describes the public health impact of pediatric conditions and introduces special considerations in the design and conduct of epidemiological studies of pediatric conditions. Resources for pediatric epidemiology and the epidemiology of common chronic pediatric conditions are also covered.

Prerequisites: PHM 2612

PHD 2770 NIH Proposal Development

3 credits

This course introduces students to the process of submission, review, and funding at the NIH, and guides students in developing grant writing skills through preparing an NIH-style application. After completing this course, students should be able to understand the NIH grant review process at its various levels. Students should also be able to develop an idea into a research project, and draft the various sections of a grant application with appropriate format and content. If a research topic of interest has not been identified, students are encouraged to think about one as soon as possible. Course assignments will assist in making this selection.

Prerequisites: PH 2710

PHW 2775 *Epidemiologic Methods in Racial and Ethnic Disparities*

3 credits

This course provides an overview of health issues related to race and health in modern U.S. society. Special emphasis is given to epidemiologic methods and perspectives in research studies using race/ethnicity; demographic trends; mortality and life expectancy; and social, etiology, biological, and genetic factors associated with health disparities by racial and ethnic group in the United States. This course builds on the previous knowledge on the methodology of analytical and descriptive study designs to understand the advantages and shortcomings of race/ethnicity in epidemiological studies.

Prerequisites: PHM 2612 (or PHM 2610)

PH 2780 *Genetic Epidemiology*

3 credits

This course introduces statistical methods and software for analyzing measured genetic variation in human studies. The primary focus will be on analytic methods with hands-on use of sample datasets and available software. Students will be refreshed on the genetic and statistical theory underlying current methodologies. Students are recommended to have previous exposure to the principles of genetics and biostatistics.

PH 2781 *Practical Python Programming and Algorithms for Data Analysis*

3 credits

This course is intended for students who are focused on big data analysis in the Python programming language from large scale epidemiologic datasets, electronic medical records, or next generation sequence data. It will cover basic programming including strings, array, dictionaries, conditional statements, data visualization, external data sources, and algorithms with a focus on using programming to solve challenges within the students' own research projects.

PH 2782 *Practical Computational Genetics and Bioinformatics*

3 credits

This course is designed as a training of necessary computational and bioinformatics skills used in everyday analysis of biological data, especially DNA sequence and polymorphism data. Topics include basic Unix/Linux command line, programming (Python), human sequence/polymorphism databases, and DNA analysis.

Prerequisites: Basic knowledge of genetics and DNA sequence

PHW 2785 *Laboratory Methods: Applications and Implications to Public Health*

3 credits

This introductory course provides an overview of various methods and techniques utilized in laboratory settings and epidemiologic investigations. Emphasis is placed on laboratory methods that are relevant to the study of public health, such as the techniques utilized in investigating disease outbreaks. This course addresses a unique need and the necessity for public health students to know the basic laboratory methods used in epidemiologic studies. An understanding of the basic concepts of immunology, molecular biology, and/or genetics would be helpful, but is not a prerequisite.

PHW 2795 *Disease Detectives: International Epidemic Investigations*

3 credits

This course presents a series of outbreaks in global settings and asks the student to conduct the investigation as though they were leading it. Information is given in stages, and as the information evolves the student has to work through possible approaches to working out the cause of an outbreak and how to control it. The student has to determine what information is needed, obtain it, determine cause, how to intervene, and finally achieve control.

Prerequisites: PHM 1690 & PHM 2610 or PHM 2612 & consent of faculty

PHM 2800 *Tropical Infectious Diseases*

3 credits

The course is designed as an introductory course in parasitology; a basic background in biology should be sufficient preparation. An understanding of the basic concepts of immunology would be helpful, but is not a prerequisite. The course will consist of a combination of lectures, group discussion, and homework assignments. For a number of topics, guest lecturers who have a unique perspective on the subject will be enlisted.

Particular viral and parasitic pathogens of humans have been selected for study based on their public health importance. Pathogens that are especially problematic in international settings and/or emerging or re-emerging diseases are given special attention. Key factors in the selection of topics include prevalence, morbidity and mortality, and societal impact of the microbe.

PH 2805 *Medical Microbiology*

3 credits

The course is designed as an introductory course in medical microbiology; a basic background in biology should be sufficient preparation. An understanding of the basic concepts of immunology would be helpful, but is not a prerequisite. The course will consist of a combination of lectures on selected topics. For a number of topics, guest lecturers who have a unique perspective of the subject will be enlisted.

Particular bacterial pathogens of humans have been selected for study based on their public health importance. Key factors in the selection of topics include prevalence, morbidity and mortality, and societal impact of the microbe.

PH 2810 *Pathology and Public Health*

3 credits

This course provides an overview of the pathophysiology of disease. The first third of the semester is devoted to studying pathophysiologic processes. Thereafter, for each body system, two to three diseases are examined and studied in detail, including clinical, histologic, and anatomic changes that occur, as well as public health implications of each. Each student presents a final research project on a disease process or type, including the pathology and public health aspects. The final grade is based on attendance, participation, examinations, and class projects.

Prerequisites: PHW 2750 (or one semester of college biology or zoology)

PH 2815 *Genetics and Human Disease*

3 credits

This course introduces principles and methods of human genetic analysis with special reference to the contribution of genes to the burden of disease. Although molecular, biochemical, and morphogenic processes controlled by genes will be briefly surveyed, the aim of the course is to describe the analytical processes whereby genetic mechanisms are inferred and genes on chromosomes are located.

Prerequisites: Consent of instructor; general genetics and statistics

Cross-listed with GSBS GS110013

PH 2820 *Introduction to Human Molecular Genetics*

3 credits

This course provides a comprehensive overview of human genetics and the role of genes in human disease. The course is taught by instructors from UTHealth School of Public Health and The University of Texas MD Anderson Cancer Center, and consists of a series of lectures from instructors and guest lecturers. While a wide range of topics are covered, many lectures focus on cancer biology and genetics.

[Cross-listed with GSBS GS110023]

Prerequisites: Consent of instructor. Undergraduate biochemistry, cell biology, and genetics

PH 2830 *Clinical Genetics in Epidemiology*

3 credits

This course teaches the role clinical genetics plays in the practice of epidemiology, and the relationship between epidemiology and medical genetics. Emphasis will be on the practice of medical genetics as it may be encountered by professionals in public health. The subject material covers basic biology of clinical genetics, genetic diseases and birth defects as seen in a medical genetics clinic, the provision of genetic services in Texas, and public policy issues relating to the practice of medical genetics.

Prerequisites: Recent course in college biology or equivalent

PHWM 2835 *Injury Epidemiology*

3 credits

PHWD 2835 *Injury Epidemiology*

3 credits

This course provides overview of the leading types of injury in the United States, as well as the epidemiologic methods employed in conducting injury research. Students will learn about injury surveillance methodology employed to foster the reporting and capturing of injury events. Students will learn to systematically critique the injury literature by applying epidemiologic methodology. Students will have the opportunity to engage in online discussion about motor vehicle accidents, violence, drowning, nail gun injury, needle stick injury, musculoskeletal, and farm-related injuries, to name a few topics.

PHM 2845 *Nutritional Epidemiology*

3 credits

PHD 2845 *Nutritional Epidemiology*

3 credits

This course teaches how to describe the methods and evaluate the issues associated with nutritional assessment of populations using dietary, biochemical, and anthropometric data. A combination of lecture, seminar, and hands-on activities are incorporated to examine the strengths and weaknesses of nutritional assessment methodologies used with epidemiologic study designs. Students are provided data and guided to explore methodologies of statistical analysis and interpretation of nutritional data.

Prerequisites: PHM 2612 or PHM 2610, PHM 1690 or PH 1700 or equivalent, or consent of instructor

PHM 2846 *Rapid Assessment Methods in Public Health*

3 credits

PHD 2846 *Rapid Assessment Methods in Public Health*

3 credits

This course presents several rapid assessment methods, both qualitative and quantitative, developed for gathering public health data in national and international arenas, as public health professionals, and epidemiologists in particular, are called upon to accurately assess community health needs and assets both during regular times and after disasters, to do surveillance of health events and monitor them, and to evaluate whether and how needs are being met. This course will help students to gain competence with both quantitative sampling methods and with qualitative data gathering methods.

PH 2860 *Advanced Design Analysis Methods in Epidemiology*

3 credits

This course primarily covers topics related to study design and appropriate data analysis using advanced techniques. At the core, the faculty will discuss basic and generalized regression models for binary (logistic), continuous (linear), and count (Poisson) outcomes; multivariate data reduction techniques, such as factors analysis and Principal Component Analysis; longitudinal models; analysis of clustered data; and select data mining methods. Whenever possible, the faculty will illustrate how to carry out data analyses in SAS or STATA or other suitable statistical packages.

Prerequisites: PH 2710 and PH 1830

PH 2950 *Genetic Epidemiology of Chronic Disease*

2 credits

This course exposes students to the evidence and logic involved in inferring the contribution of genetic mechanisms to those diseases of public health importance. Emphasis will be on developing a framework for assessing the impact of genes on common disease, but will not include detailed methodological developments or statistical techniques. The format will be a weekly two-hour session during which a single disease will be examined. In this way, students will be introduced to a broad spectrum of diseases and learn to recognize the similarities and the uniqueness inherent to each. Sessions will be comprised of lectures and discussions. [**Cross-listed with GSBS GS110092**]

PH 2960 *Seminar in Genetics and Population Biology*

1 credit

Students analyze and present individual topics or research. [Cross-listed with GSBS GS110711]

Prerequisites: Consent of instructor

PHM 2970 *Foundations of Public Health Genetics*

3 credits

PHD 2970 *Foundations of Public Health Genetics*

3 credits

This course is designed mainly (but not exclusively) for students with a limited background in genetics who want to gain an appreciation of the importance and current limitations of the application of human genetics to public health approaches to identifying and ameliorating disease. The course aims to provide enough background in genetics, human biology, and genomics to allow students to understand and appreciate the role of human genetics in public health. Doctoral students will complete additional work to demonstrate the ability to synthesize information from published papers and online resources and use it to analyze features of genetic diseases that are unique, unusual, or not yet well understood.

PHD 2990 *Epidemiology Seminar*

1 credit

The Epidemiology Seminar is open to all students, but is mandatory for epidemiology doctoral students who have not yet taken their preliminary examination. The seminar is intended to hone research and presentation skills, and to provide students an opportunity to present data, a research proposal, or an epidemiology-related topic to an audience of their peers and mentors. The seminar will provide students an opportunity to receive critical feedback on their research and develop professional interactions between faculty and other students.

PH 2998 *Special Topics in Epidemiology*

Credit hours vary among Special Topics courses

Special Topics in Epidemiology vary each semester. Previous topics have included:

PH 2999 *Independent Study in Epidemiology*

1-9 credits

A plan of study is determined for each participating student, and supervised by a member of the Epidemiology faculty. In general, courses of independent study are not recommended unless a student has completed the introductory course or presents evidence of experience in the field of epidemiology. All independent study courses are required to have learning objectives and an outline of learning activities.

ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES

Environmental and Occupational Health Sciences (EOHS), located in the Department of EHGES, is the field of study that deals with the (1) anticipation, identification, and characterization of potentially harmful physical, chemical, and biological agents in community and workplace environments; (2) identification and study of the relevant pathways of exposure; (3) assessment of the effects of such agents on the environment and human health; and (4) development of interventions to prevent or ameliorate problems associated with environmental or occupational contaminants. Biological, genetic, psychological, and social factors are also important determinants of environmental and occupational health.

Within EOHS, the industrial hygiene master's curriculum is accredited by the Applied Science Accreditation Commission of ABET (<http://www.abet.org>). The occupational and environmental medicine residency program is accredited by the Accreditation Council for Graduate Medical Education (ACGME). For more information on these programs, refer to the website for the [Southwest Center for Occupational and Environmental Health](#) (under "Research/Centers" tab).

EOHS offers the MPH in Environmental Health, and the PhD degree in Environmental Sciences. The MPH degree focuses on public health practice related to the prevention, assessment, and control of occupational and environmental exposures, injuries, and illnesses, which constitute major problems not only nationally but also internationally. The PhD degree is designed to develop both in-depth knowledge in a particular specialty area and a broad understanding of the complexities inherent in environmental problem, along with a focus on research.

Minor in Environmental Sciences

EOHS also offers a minor course of study (minimum nine (9) semester credit hours) for MS, doctoral students majoring in other public health disciplines. The prerequisite science background for these courses is required to take the minor course of study in EOHS.

- Masters students: **PHWM 2100 Foundations of Environmental and Occupational Health Sciences & two EOHS electives (PHM 2130 & PH 2175 are recommended)**
- Doctoral students: **PHD 2135 Risk Analysis: Principles and Practice & PHWD 2106 Introduction to Doctoral Research Methods in Environmental and Occupational Health Sciences, OR PHWD 2108 Applied Epidemiological Analyses in Environmental and Occupational Health Sciences, OR PHWD 2760 Occupational Epidemiology; & an EOHS elective**

Master of Public Health (MPH) Degree Program

The MPH in Environmental Health is a minimum of 45 semester credit hours and is designed to prepare students to assume positions in public health practice in the government or the private sector. The program provides a foundation in environmental and occupational health sciences in addition to the skills needed to function as a practitioner in a variety of public health settings.

Special Entrance Requirements

Applicants to the MPH program should have successfully completed coursework in mathematics, chemistry, and biological sciences. Applicants typically hold a bachelor's or higher degree in the physical, chemical, or biological sciences; engineering; nursing; or medicine from a regionally accredited institution of higher education. Applicants with majors from other disciplines who satisfy the undergraduate coursework requirements will be considered. Additional requirements apply for certain areas of study, including industrial hygiene and occupational and environmental medicine. See the 'Application Process & Deadlines' and 'Admissions Process' sections for more information.

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Environmental Health:

- MPH Core: **PHM 1690, PHM 2612, PHM 3715, PHM 1110, PHWM 2110 & PHM 5015**
- Major Courses: **PH 2175 Toxicology I: Principles of Toxicology; PH 2205 Health and Safety Program Management and Leadership; Two of: PH 2135 Risk Analysis: Principles and Practice, PH 2150 Air Environment, PH 2230 Water Environment, PH 2245 Fundamentals of Industrial Hygiene**
- Elective courses in EOHS
- Applied Practice Experience: **PH 9997 Practicum**
- Integrative Learning Experience: *Capstone* OR **PHM 9998 Thesis Research**

For a sample of the course of study for an MPH in Environmental Health, please see the degree planner at <https://sph.uth.tmc.edu/academics/degree-programs/master-of-public-health-mph/>.

Doctor of Philosophy (PhD) Degree Program

The PhD in Environmental Sciences is a minimum of 48 semester credit hours and offers in-depth didactic and research training for students who want to focus their careers in academic, governmental, or other research institutions, and/or in high-level policy/regulatory positions.

Students applying to the PhD program in Environmental Sciences will select one of the following two (2) Tracks: **Environmental Disease Prevention** or **Total Worker Health**. These two Tracks offer research experiences in areas that are increasingly posing public health challenges by impacting quality of life and introducing health disparities within different segments of the population. The **Environmental Disease Prevention Track** will provide students experience in identifying and measuring disease agents in various environments, and opportunities to develop ways to mitigate associated public health risks. The **Total Worker Health Track** is an addition to the NIOSH-funded Education and Research Center (ERC) Southwest Center for Occupational and Environmental Health (SWCOEH). Graduates will be able to conduct research that characterizes worker well-being, as well as implement policies and practices that improve worker health.

Special Entrance Requirements

Applicants to the PhD program should have a prior MS or equivalent degree in Environmental Health Sciences or a related field from an accredited institution of higher education. In addition, applicants are expected to have successfully completed coursework in calculus, organic chemistry, physics, and biological sciences. See the 'Application Process & Deadlines' and 'Admissions Process' sections for more information.

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for a PhD student majoring in Epidemiology, Environmental Disease Prevention Track:

- Leveling Courses: **PH 1700 Intermediate Biostatistics; PHM 2110 Public Health Ecology and the Human Environment; PH 2175 Toxicology I: Principles of Toxicology; PHM 2612 Epidemiology I**
*PHM leveling courses do not count toward the credit-hour minimum for the degree.
- Major Courses: **PHD 2105 EOHS Doctoral Seminar & PHWM 2106 Introduction to Doctoral Research Methods in EOHS & PH 2245 Fundamentals of Industrial Hygiene**
- Track-Specific Courses: **PHD 2135 Risk Analysis - Principles and Practice & PHD 2177 Toxicology II: Toxic Agents and the Environment & PHD 2126 Fundamentals and Applications of GIS & PH 2155 Environmental Sampling and Analysis & PHD 2150 Air Environment OR PHD 2130 Water Environment**
- Minor: Epidemiology Minor
- Breadth: Person-Centered Well-Being Breadth

- **PHD 9999** *Dissertation Research*

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for a PhD student majoring in Epidemiology, Total Worker Health Track:

- Leveling Courses: **PH 1700** *Intermediate Biostatistics*; **PHM 2110** *Public Health Ecology and the Human Environment*; **PH 2175** *Toxicology I: Principles of Toxicology*; **PHM 2612** *Epidemiology I*
*PHM leveling courses do not count toward the credit-hour minimum for the degree.
- Major Courses: **PHD 2105** *EOHS Doctoral Seminar* & **PHWM 2106** *Introduction to Doctoral Research Methods in EOHS* & **PH 2245** *Fundamentals of Industrial Hygiene*
- Track-Specific Courses: **PH 2205** *Health and Safety Program Management and Leadership* & **PH 2246** *Principles of Occupational Ergonomics* & **PH 2241** *Fundamentals of Occupational Safety* & **PWHD 2760** *Occupational Epidemiology*
- Minor: Health Promotion and Behavioral Sciences Minor
- Breadth: Worker-Centered Well-Being Breadth
- **PHD 9999** *Dissertation Research*

Doctoral students may take the preliminary exam once they have completed – depending on their degree program – 16-20 credit hours of coursework (equivalent to one full-time year), and must take the exam at the next scheduled administration after they have reached 27 credit hours of coursework. All students pursuing a PhD in EOHS must pass the preliminary examination and dissertation proposal defense for admission to doctoral candidacy. The final degree requirement is the completion of an original research dissertation, agreed upon with the dissertation committee, which the doctoral candidate will present and defend in a public forum at the school.

For a sample of the course of study for a PhD in EOHS, please see the degree planners for each of the two Tracks at <https://sph.uth.tmc.edu/academics/degree-programs/doctor-of-philosophy-phd/>.

Courses, Environmental and Occupational Health Sciences

PHWM 2100 *Foundations of Environmental and Occupational Health Sciences*

4 credits

This one-semester course covers basic concepts in the field as groundwork upon which the remainder of the EOHS curriculum is built. This course is part of the common core courses required of all MPH majors in the EOHS program. In addition, doctoral students selecting a minor in EOHS will typically complete this course, together with **PHM 2130** *Recognition of Environmental and Occupational Hazards*, in partial fulfillment of their coursework requirements.

Prerequisites: Must be a master's student majoring in the EOHS program, or a doctoral student from other departments or programs with a minor in EOHS; or equivalent undergraduate preparation as that of an EOHS major. Exceptions with consent of instructor.

PHM 2101 *Contemporary Issues in Environmental and Occupational Health*

2 credits

PHD 2101 *Contemporary Issues in Environmental and Occupational Health*

3 credits

This course surveys significant current issues in the field of EOHS and policy, with the goal of preparing students to critically assess peer-reviewed literature and apply the literature to future professional work in the private sector, the public sector, or academia. Students will learn how to analyze, interpret, and critique articles published in the peer-reviewed literature through lecture, class group discussion, and presentations. This course provides an overview of many of the most important topics at the forefront of

the field, including gene-environment interactions, environmental health disparities, sustainability, exposure assessment, translational research, innovative technology and science, occupational health, and clinical medicine.

Doctoral students will engage in additional evaluation of their and their peers' research sources and methods.

PHD 2105 *Environmental and Occupational Health Sciences Doctoral Seminar*

1 credit

This seminar course is designed for doctoral students and post-doctoral fellows in EOHS. Doctoral students in other departments and programs may enroll with the consent of the instructors. The course combines research seminar presentations with specific assignments to provide students an opportunity to improve their knowledge of the latest EOHS topics, their presentation skills, and their scientific productivity in the formulation of research proposals and journal publications and presentations at scientific meetings. The seminar provides opportunities to involve mentors (advisors, dissertation supervisors, committee members) and to practice mentoring and teaching with other class members.

PHWD 2106 *Introduction to Doctoral Research Methods in Environmental and Occupational Health Sciences*

2 credits

This course provides doctoral students with a background in the perspectives, key concepts, and methods involved in conducting research and evaluating scientific claims in the EOHS context, part of the necessary training to undertake a future research project. The course considers basic aspects and challenges of the philosophy of science and the inference of causality; ethical issues on conducting research; study design and sampling methods; the role of statistics; and the appropriateness of the measures of association, including hypothesis formulation and testing; and presentation of findings. Students are also introduced to the scientific production process.

PHWD 2108 *Applied Epidemiological Analyses in Environmental and Occupational Health Sciences*

3 credits

The course gives doctoral students experience in developing skills and designing strategies to plan the analysis of and critically evaluate epidemiological data from occupational and environmental settings. The goal of the course is to prepare students to integrate their knowledge of epidemiology and biostatistics through applied data analysis in the context of occupational and environmental problems.

PHWM 2110 *Public Health Ecology & the Human Environment*

3 credits

This course provides an introductory overview of the basic principles underpinning public health ecology and environmental health. It satisfies the core environmental health MPH requirement for majors and non-majors. Students are provided with foundational knowledge in public health ecology, principles of environmental health and an introduction to environmental policies & controls. Applications of this knowledge will be applied to an environmental case study, wherein students will use a systems thinking approach to identify the key elements of the problem, develop solutions and articulate a dissemination plan. In addition, inter-professional engagement simulations will be used to provide students with skills for engaging stakeholders, including community members, policy makers/enforcers, and other healthcare professionals.

PHWM 2120 *Man's Impact on the Environment*

3 credits

This course provides a general awareness of how the man-made and natural ecosystem interact to affect health and the quality of life, reviews relevant principles from the natural sciences, and discusses issues

influencing the solutions to environmental health problems. The course objectives will be accomplished through lectures, videos, class discussions, group activities, written assignments, and examinations.

PH 2126 *Fundamentals and Applications of GIS*

3 credits

This course teaches basic concepts of GIS and common methods of spatial analysis that are critical for understanding where health events happen (e.g., Snow's cholera map) and important across all components of public health, including environmental sciences, epidemiology, health planning and policy, health promotion, and international health. The course objectives will be accomplished through a combination of lectures, hands-on labs, and student projects.

PHM 2130 *Recognition of Environmental and Occupational Hazards*

2 credits

This course provides an overview of industrial and community sources of major chemical hazards. Principal toxicological effects of and diseases affected by these chemicals are presented. The occurrence as ambient air, water, soil, and indoor and workplace pollutants is described. Transport to other environmental media, and environmental and biological fate are discussed for some key pollutants.

Prerequisites (or, concurrently): PHM 2100

PH 2132 *Infection Control and Biosafety*

3 credits

The field of infectious disease and control is mainly composed of four professions: infection preventionists, biosafety professionals, environmental health specialists, and public health professionals. Although the targeted populations for each of these professions differ, a common set of core competencies exists that are essential in order to successfully prevent or control infection. This course focuses on the core competencies that are common amongst all of these professions and will also discuss differences between these trades.

Prerequisites: Undergraduate biology required. A course in microbiology preferred.

PHM 2135 *Risk Analysis: Principles and Practice*

3 credits

PHD 2135 *Risk Analysis: Principles and Practice*

3 credits

The purpose of this course is to provide students with the principles of risk assessment for environmental and occupational health hazards. This course introduces important components in risk assessment including hazard identification, exposure assessment, dose-response assessment, risk characterization, and risk management. Case studies are used to demonstrate important principles and practices of risk analysis.

PHW 2150 *Air Environment*

3 credits

This course provides a comprehensive introduction of air pollution with a focus on its effects on human health. It covers a variety of topics related to air quality, including fundamental principles, measurements and control, exposure and risk assessment, epidemiology, energy and air quality, environmental justice, and regulations. Both outdoor ambient air and (non-occupational) indoor air quality are considered. Special emphasis is placed on human health effects and the determinants of human exposure.

PH 2155 *Environmental Sampling and Analysis*

4 credits

This course covers the theoretical bases and practical applications of sampling techniques and analytical methods used in the quantitative determination of chemical air contaminants, ionizing radiation, and noise in the workplace and community environments. Emphasis will be on spectroscopic, chromatographic, and other modern instrumental methods. Laboratory exercises will be included. Lab fee: \$10.00

Prerequisites: Undergraduate chemistry and mathematics, or consent of instructor

PH 2175 *Toxicology I: Principles of Toxicology*

3 credits

This course presents basic principles of toxicology and their applications to the understanding of xenobiotic-induced target organ toxicity. Topics covered include toxicant disposition, mechanisms of toxicity, and target organ responses to toxic agents. A broad overview of various classes of toxic agents will be presented in the context of their exposure routes, disposition, toxicologic sequelae, and mechanisms of toxicity. This course is designed to provide a foundation for understanding the complex interactions between toxicants and biologic systems.

Prerequisites: Prior biological science coursework required (i.e., biology, chemistry, or physiology) and consent of instructor

PH 2177 *Toxicology II: Toxic Agents and the Environment*

3 credits

This course provides in-class discussions, based on guided readings, on current topics in toxicology. The discussions include the historical context for our understanding of toxicant-induced adverse health effects. Class activities will be based on discussions of books designed for the lay public and the scientific literature on which these books are based. Principle mechanisms of toxicity as they relate to the understanding of environmentally induced disease form the framework for the course. In-depth reviews of various classes of environmental contaminants and their adverse health effects will be presented.

Prerequisites: PH 2175 preferred or consent of instructor

PH 2205 *Health and Safety Program Management and Leadership*

3 credits

This course introduces students to “real-world” challenges related to the management of occupational health and safety programs. Students will be equipped with the knowledge and skills needed to effectively manage a successful health and safety program. This course is a practical introduction to occupational health and safety program management for field practitioners with interest in related disciplines (e.g., industrial hygiene, ergonomics, occupational epidemiology, safety engineering). It draws on concepts from strategic, quality, and accounting management; sociology; political science; and behavioral sciences. Using “real-world” health-and safety-based examples, students will be challenged to apply the concepts presented in class to real-world scenarios.

PHM 2230 *Water Environment*

3 credits

PHD 2230 *Water Environment*

4 credits

This course provides students with an overview of the ecological, cultural, and human health significance of water. Students will learn through a combination of lectures, class discussions, and case studies. Issues of water quantity and quality, sustainability, chemical and biological contaminants, water treatment, and conservation practices will be covered. Current water regulations, underlying risk assessments, and related health issues for selected contaminants will be presented.

Doctoral students will select a water-related health issue and complete a project describing its importance to public health, identify any gaps in current knowledge and policy, and predict future impacts on environmental science and/or public health.

PH 2241 *Fundamentals of Occupational Safety*

3 credits

This course is designed as a practical introduction to occupational safety for practitioners with interest in related disciplines (e.g. industrial hygiene, ergonomics, occupational epidemiology, safety engineering). The course will focus on hazard recognition, assessment of accident potential, and hazard control. Students will be introduced to the evolution of the safety profession and will be presented with a variety of laws, regulations, codes and standards, and other occupational safety and accident prevention information.

PH 2245 *Fundamentals of Industrial Hygiene*

4 credits

This course introduces students to concepts of industrial hygiene and occupational health hazards. Typical industrial conditions that may produce work-related disorders and diseases are studied. Major chemical, physical, and biological stresses in the industrial environment are presented, and important sources, effects, and evaluation and control measures are discussed. Where appropriate, typical calculation methods are included.

Prerequisites: Undergraduate biology, chemistry (organic chemistry), and mathematics

PH 2246 *Principles of Occupational Ergonomics*

3 credits

This course is designed to introduce students to the principles of ergonomics with a focus on the physiological and anatomical capabilities of the worker and interaction with their environment. The course will review anthropometry, physiological basis of work, occupational musculoskeletal disorders and risk factors, workplace and equipment design, environment, job analysis, and elements of the ergonomics process to improve job design.

PH 2250 *Occupational Health Controls*

4 credits

This course presents the principles and practice of controlling workplace and associated hazards, and details CPC, respiratory protection, dilution, and local exhaust ventilation engineering controls: basic design and evaluation of industrial ventilation systems, and noise control.

Prerequisites: PH 2245; or consent of instructor: PHM 2100 or 2110 or 2120, and PHM 2130

PH 2255 *Clinical Occupational Medicine*

4 credits

This course offers students the opportunity to familiarize themselves with the clinical practice of and current issues in occupational medicine, supplements their basic knowledge in the clinical presentations of occupational illness and injury by organ systems, and introduces them to systematic approaches to the evaluation and management of work-related injury and illness. The course is designed for students interested in occupational medicine practice and who have taken at least one college-level biology course.

PH 2260 *Occupational Health Field Trips*

3 credits

This course takes students into approximately six industrial and occupational settings, with analysis of processes and potential worker health hazards involved. This course aims to introduce students to basic industrial processes and delivery of occupational health services through plant visits; to enable students to perform simple walk-through evaluations of plant facilities and to provide written reports on these evaluations in order to identify potential workplace hazards and evaluate their level of control; and to help students appreciate the importance of using an integrated interdisciplinary approach in the anticipation, evaluation, and control of workplace hazards.

Prerequisites: PH 2245 or consent of instructor

PH 2265 *Occupational Medicine Practice*

2 credits

This seminar-style course presents topics of current interest in the practice of occupational medicine. In this course, both faculty and students prepare and discuss topics. Topics vary from year-to-year and semester-to-semester, and include didactic presentations by students, faculty, or invited speakers; field visits to selected worksites; board certification review sessions; and an annual in-service practice examination to assist in preparation for the American Board of Preventive Medicine certification examination.

PH 2280 *Environmental Microbiology*

3 credits

This course introduces to environmental microbiology, with particular emphases on how microorganisms are transmitted to humans as well as ways to identify and prevent this transmission. Topics include microbial sources of contamination; environmental sampling and laboratory techniques; preventive strategies for air-, water-, and food-borne disease; global issues impacting microbial disease; and the roles of epidemiology and risk assessment in addressing human exposure to environmental microbes.

PH 2285 *Topics in Infectious Diseases*

3 credits

This course introduces current perspectives of selected classical and emerging infectious diseases. Guest lecturers are from academia, including UT Southwestern Medical Center, Infectious Diseases Division, and also the Dallas County Health and Human Services Department. Temporal and geographical aspects of the diseases are presented from a public health perspective. Students are expected to write a short summary or analysis of each lecture prior to the following lecture.

PHM 2290 *Immunology*

3 credits

This course covers the essential concepts of the human immune response and their relevance to disease control and prevention. There will be presentations from guest lecturers who have expertise in specific areas where the principles of immunology find their application to human health. Throughout the course, extra emphasis is placed on aspects of immunology with particular relevance to public health, such as immunodeficiency, blood transfusion, nutrition and immunology, tumor immunology, and vaccines. Each student will prepare a report on an area of immunology that is of particular interest to them.

Prerequisites: Basic background in biology

PH 2498 *Special Topics in Environmental and Occupational Health Sciences*

Credit hours vary among Special Topics courses

Topics vary each semester to provide intensive study of selected environmental factors, or specific methods of analysis, evaluation, or control.

PH 2499 *Independent Study in Environmental and Occupational Health Sciences*

1-9 credits

A plan of study is determined for each participating student, and supervised by a member of the EOHS faculty. All independent study courses are required to have learning objectives and an outline of learning activities. This course may be repeated for credit.

HEALTH PROMOTION AND BEHAVIORAL SCIENCES

The Department of Health Promotion and Behavioral Sciences (HPBS) seeks to improve public health through the application of social and behavioral sciences to solving the problems of human disease and disability. Lifestyle behaviors and aspects of the social environment offer important opportunities to modify the incidence, prevalence, and mortality from many diseases. The department's academic and research programs focus on identifying the modifiable determinants of health and disease, and on developing and testing interventions to change or eliminate those determinants. Students may work with an academic advisor from among faculty members who have a primary or a secondary appointment in the department.

The department offers the MPH and DrPH degrees in Health Promotion/Health Education and the PhD degree in Behavioral Sciences and Health Promotion. The department also offers a MPH degree with a Dietetic Internship Track.

Minor in Behavioral Sciences

The department offers a minor course of study (nine (9) semester credit hours) for MS, and doctoral students majoring in other public health disciplines. The requirements for a minor in Behavioral Sciences include three courses; at least one course from the Theory category and one course from the Methods category are required:

- Theory Courses: **PHD 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs* OR **PHD 1122** *Health Promotion Theories for Individuals and Groups: Part I* OR **PHD 1123** *Community Health Promotion Theory and Practice* OR **PHD 1227** *Health Promotion Theories for Individuals and Groups: Part II*
- Methods Courses: **PHD 1118** *Qualitative Methods* OR **PH 1324** *Applied Discrete Data Analysis using Stata* OR **PHD 1130** *Applied Measurement Theory* OR **PHD 1132** *Latent Variable Models and Factor Analysis* OR **PHD 1420** *Quantitative Research Design for Behavioral Sciences* AND **PHD 1421** *Quantitative Analysis for Behavioral Sciences* OR **PHD 1430** *Systematic Review, Meta-Analysis, and Evidence-Based Public Health* OR **PHD 1431** *Tools and Methods for Systematic Reviews and Meta-Analysis*

Centers

Research centers affiliated with the Department of HPBS provide opportunities for students in all degree programs to work intensively with faculty. The department houses two centers: Center for Health Promotion and Prevention Research (CHPPR) and the Michael & Susan Dell Center for Healthy Living. The mission of CHPPR is to conduct research to develop, evaluate, and disseminate health promotion and disease prevention programs in diverse settings and populations. The mission of the Michael & Susan Dell Center for Healthy Living is to advance health and healthy living for children and families through cutting-edge research, innovative community-based programs, and dissemination of evidence-based practices. The Michael & Susan Dell Center for Healthy Living is an international leader in conducting research and providing programs that promote healthy living for children, their families, and communities. It fosters improved health behaviors among youth, influences policy and environmental change to support healthy living, and advances professional education and community service.

Master of Public Health (MPH) Degree Program

The MPH in Health Promotion/Health Education is a minimum of 45 semester credit hours and is designed to integrate the broad field of public health with the behavioral and social sciences. The curriculum includes intervention methods for health promotion development and evaluation in a variety of settings.

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Health Promotion/Health Education:

- MPH Core: **PHM 1690, PHM 2612, PHM 3715, PHM 1110, PHWM 2110 & PHM 5015**
- Major Courses: **PHM 1111** *Health Promotion Theory and Methods* & **PHM 1112** *Community Assessment Methods in Public Health* & **PHM 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)* OR **PHM 1117** *Advanced Methods for Planning and Implementing Health Promotion Programs - Short Course* & **PHM 1120** *Program Evaluation* & **PH 1433** *Research Seminar in Health Promotion and Behavioral Sciences*
- Electives
- Applied Practice Experience: **PH 9997** *Practicum*
- Integrative Learning Experience: *Capstone* OR **PHM 9998** *Thesis Research*

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Health Promotion/Health Education, Dietetic Internship Track:

- MPH Core: **PHM 1690, PHM 2612, PHM 3715, PHM 1110, PHWM 2110 & PHM 5015**
- Major Courses: **PHM 1111** *Health Promotion Theory and Methods* & **PHM 1117** *Advanced Methods for Planning and Implementing Health Promotion Programs - Short Course*
- Dietetic Internship Track Courses: **PHM 1232** *Public Health Nutrition Practice* & **PH 2755** *Nutrition Research Methods* & **PH 1231** *Medical Nutrition Therapy* & **PH 5098** (section 800) *Garden for Health* (Course Fee: \$75.00) & **PH 5098** (section 850) *Culinary Medicine* (Course Fee: \$75.00)
- Integrative Learning Experience: **PH 1229** *MNT Simulation & Capstone*
- Applied Practice Experience: **PH 9997** *Practicum*

For a sample of the course of study for either offering of a MPH in HPBS, please see the degree planner at <https://sph.uth.tmc.edu/academics/degree-programs/master-of-public-health-mph/>.

Doctor of Public Health (DrPH) Degree Program

The DrPH in Health Promotion/Health Education is a minimum of 48 semester credit hours and is designed to develop leaders in health promotion practice. Students are trained to conduct applied research in public health settings. It is primarily designed for those who plan to apply scientific discoveries and use strong analytical skills to assess public health problems. They are also trained to develop, implement, and evaluate theory-based public health interventions in practice settings. An important component of this degree program is the ability to communicate findings to the public and policymakers. Students are required to complete a minimum of 48 semester credit hours of coursework (a maximum of nine (9) combined credit hours of applied practice and dissertation count toward the minimum of 48 semester credit hours); a required DrPH core; and either a breadth or minor area of study outside Health Promotion/Health Education department.

Special Entrance Requirements

Applicants to the DrPH program should hold an earned master's degree or equivalent in public health with a substantial behavioral sciences component. Preferred applicants are those who have leadership experience through paid employment or volunteer work. In exceptional cases, applicants without the required academic background in public health may be accepted on the condition of additional coursework in public health. Applicants are asked to submit a writing sample that demonstrates competence in written communication for academic work. Theses, publications, or other academic work are preferred. Applicant should be the sole or first author on the submitted work. See "Application Procedures and Deadline Dates"

section for a list of required application materials, and “Admissions Process” section for factors considered in the admission decision.

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for a DrPH student majoring in Health Promotion & Health Education:

- Before Preliminary Exam: **PHD 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)* & **PHD 1120** *Program Evaluation* & **PHD 1122** *Health Promotion Theories for Individuals and Groups: Part I* & **PHD 1123** *Community Health Promotion Theory and Practice* & **PHD 1420** *Research Design for Behavioral Sciences* & **PHD 1421** *Quantitative Analysis for Behavioral Sciences* & **PH 1433** *Research Seminar in Health Promotion & Behavioral Sciences*
- After Preliminary Exam: **PHD 1118** *Advanced Qualitative Methods* & **PH 1498** *ST: Dissemination and Implementation - Short Course* & **PHD 3950** *Advanced Leadership Studies in Public Health* & **PHD 3998** *ST: Community Engagement & CBPR*
- Minor or Breadth
- Electives
- Applied Practice Experience: **PH 9997** *Practicum*
- Dissertation: **PHD 9999** *Dissertation Research*

For a sample of the course of study for a DrPH in HPBS, please see the degree planner at <https://sph.uth.tmc.edu/academics/degree-programs/doctor-of-public-health-drph/>.

Doctor of Philosophy (PhD) Degree Program

The PhD degree in Behavioral Sciences and Health Promotion is designed to provide students with the skills necessary to succeed in academic and research positions. The PhD program primarily prepares scholars to integrate and develop state-of-the-art social and behavioral science theory, design, and analytic approaches to examine current problems in public health. The emphasis is on preparation for independent research and teaching. An important component of this degree program is the ability to contribute to the scientific literature. PhD students are required to complete a minimum of 48 semester credit hours of coursework (a maximum of nine (9) combined credit hours of applied practice, thesis, or dissertation count toward the minimum of 48 semester credit hours); a *recommended* breadth in Research Methods; and one minor area of study outside Health Promotion/Health Education department.

Special Entrance Requirements

Applicants to the PhD program should hold an earned master’s degree in a social or behavioral sciences or an earned master’s degree in public health with research experiences, thesis experience, and/or coursework related to social and behavioral sciences or an earned master’s degree in another field and at least 12 hours of upper-division undergraduate or graduate coursework in social or behavioral sciences. In exceptional cases, applicants without this experience may be accepted on the condition of completing additional graduate work in the behavioral or social sciences. Applicants are asked to submit a writing sample that demonstrates competence in written communication for academic work. Theses, publications, or other academic work are preferred. Applicants should be the sole or first author on the submitted work. See the ‘Application Process & Deadlines’ and ‘Admissions Process’ sections for more information.

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for a PhD student majoring in Behavioral Sciences and Health Promotion:

- Before Preliminary Exam: **PHD 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)* & **PHD 1122** *Health Promotion Theories for Individuals and Groups: Part I* & **PHD 1227** *Health Promotion Theories for Individuals and Groups:*

Part II & PHD 1420 Research Design for Behavioral Sciences & PHD 1421 Quantitative Analysis for Behavioral Sciences & PH 1433 Research Seminar in Health Promotion & Behavioral Sciences & PHM 2612 Epidemiology I

- After Preliminary Exam: **PHD 1118** Advanced Qualitative Methods & **PHD 1435** *HPBS Doctoral/Post-Doctoral Research Seminar* & **PH 1498** *ST: Proposal Writing for Behavioral Sciences and Health Promotion*
- One breadth and one minor
- Electives
- Dissertation: **PHD 9999** *Dissertation Research*

All students pursuing a PhD in HPBS must pass the preliminary examination and dissertation proposal defense for admission to doctoral candidacy. The final degree requirement is the completion of an original research dissertation that focuses on the social and behavioral aspects of public health or the development and evaluation of health promotion interventions, agreed upon with the dissertation committee, which the doctoral candidate will present and defend in a public forum at the school

For a sample of the course of study for a PhD in HPBS, please see the degree planner at <https://sph.uth.tmc.edu/academics/degree-programs/doctor-of-philosophy-phd/>.

Courses, Health Promotion and Behavioral Sciences

PHM 1110 *Health Promotion and Behavioral Sciences in Public Health*

3 credits

After completing this MPH core course, students will be able to explain the contribution of health promotion and behavioral sciences to public health. Students will learn about commonly used theories and models, community engagement, needs assessment, and program design, implementation, and evaluation. Throughout the semester, students will improve oral and written communication skills while applying newly acquired knowledge related to public health problems.

PHM 1111 *Health Promotion Theory and Methods*

4 credits

This course introduces students to the application of selected behavioral science theories and concepts in health promotion directed to affect individual behavior change, and environmental and policy theories and concepts to affect changes in organizations, communities, and governments. Topics specific to environmental and policy change include organizational change theory, mass media, community organizations, diffusion of innovations, social networks, community development, community engagement, and public policy campaigns. Students are provided opportunities to demonstrate knowledge and gain experience in applying theory, in designing interventions, and in building coalitions to affect programs, policies, and environmental conditions.

Prerequisites: PHM 1110

PH 1112 *Community Assessment Methods in Public Health*

3 credits

This course will ground students in key concepts and methodologies related to community assessment, including the meaning of community and methods for assessment that span primary and secondary data collection. The assessment process will be conceptualized as a research methodology and process for development and prioritizing community health programs and policy. The course also introduces new and non-traditional methods and technologies, and covers practical considerations such as assessment scoping, budget, staffing, communications, and supporting the community in action planning and implementation.

Prerequisites: PHM 1110 and PHM 1111

PHM 1113 *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)*

3 credits

PHD 1113 *Advanced Methods for Planning and Implementing Health Programs (Intervention Mapping)*

3 credits

This course integrates and extends the knowledge of behavioral science theory into planning models for health promotion programs that include conducting a needs assessment, determination of priorities, setting goals, stating objectives, designing interventions, and developing an implementation plan. The teaching methods emphasize group process skills through modeling and guided practice applied to the planning process. Student evaluations include a guided written health promotion project plan and participation in class and group assignments. Doctoral students will function in group leadership roles, as well as prepare a concept outline and abstract as part of preparation of class papers for publication and also present their projects to the class.

Prerequisites, PHM 1113: PHM 1690 or PH 1700, PHM 2610 and PHM 1111

Prerequisites, PHD 1113: PH 1700, PHM 2610, PHM 1111 or PHD 1122

PHM 1116 *Introduction to Intervention Mapping*

2 credits

PHD 1116 *Introduction to Intervention Mapping*

2 credits

This one-week intensive course integrates and extends the knowledge of behavioral science theory into planning models for health promotion programs that include conducting a needs assessment, determination of priorities, setting goals, stating objectives, designing interventions, and developing an implementation plan. The teaching methods emphasize group process skills through modeling and guided practice applied to the planning process. Students work on health problems of their choice. Student evaluations include a guided written health promotion project plan and participation in class and group assignments. Doctoral students will function in group leadership roles, as well as prepare a concept outline and abstract as part of preparation of class papers for publication and also present their projects to the class.

Prerequisites, PHM 1116: PHM 1690, PHM 2610, and PHM 1111.

Prerequisites, PHD 1116: PH 1700, PHM 2610, and PHM 1111 or PHD 1122

PHM 1117 *Advanced Methods for Planning and Implementing Health Promotion Programs – Short Course*

3 credits

PHD 1117 *Advanced Methods for Planning and Implementing Health Promotion Programs – Short Course*

3 credits

This course integrates and extends the knowledge of behavioral science theory into planning models for health promotion programs. Students take a one-week intensive course before the semester begins to obtain an overview of Intervention Mapping. During the following semester, students work independently to fully develop written plans for conducting a needs assessment, determination of priorities, setting goals, stating objectives, designing interventions, and developing an implementation and evaluation plan for a health problem of their choice. Student evaluations include a guided written health promotion project plan.

Doctoral students will also prepare a concept outline and abstract as part of preparation of class papers for publication.

Prerequisites, PHM 1117: PHM 1690 or PH 1700, PHM 2610 and PHM 1111.

Prerequisites, PHD 1117: PH 1700, PHM 2610 and PHM 1111 or PHD 1122

PHD 1118 *Qualitative Methods*

3 credits

The course covers the underpinnings of qualitative research, some of the major qualitative research traditions, methods of data collection used in the conduct of qualitative inquiries, and preliminary analysis of text data. Part I provides a broad overview of qualitative research traditions and techniques as students begin to conceptualize and design their own research project. Part II covers the design and practice of fieldwork: students gain experience with some research methods and develop preliminary qualitative research proposals for a field-based research project. Part III covers qualitative analysis and presents the students with the opportunity to learn preliminary coding techniques for thematic content analysis. Methodological practice reports, an annotated bibliography, and a preliminary grant proposal are required.

PH 1119 *Advanced Qualitative Analysis*

3 credits

This one-week intensive course provides the basic tools for analyzing data from different qualitative research paradigms. We will examine several analytical approaches that are appropriate to a particular data project's overarching theoretical approach and the topical focus of the study from which it was produced. Students will learn the basics of a qualitative database software program for coding textual and visual data.

Prerequisites: PHD 1118, PH 5015 or consent of instructor

PHM 1120 *Program Evaluation*

3 credits

PHD 1120 *Program Evaluation*

3 credits

This course introduces students to the theory and application of program evaluation, emphasizing a range of evaluation goals and designs. In this course, an evaluation plan structure focuses on three levels: (1) critique of the program concept and design; (2) program implementation and process; and (3) program impact and outcomes. Program logic models are used to guide the program evaluation process. Stakeholders are identified and involved to emphasize collaborative approaches to promote evaluation plan feasibility and relevance. Students will identify a community-based program or policy as the basis for their work to enhance the "real world" experience. Doctoral students will also prepare an independent evaluation plan for the community partner, and also will be expected to develop an evaluation survey.

Prerequisites: PHM 2610, PHM 1110 or PHM 1111

PHD 1121 *Advanced Methods in Program Evaluation*

4 credits

The course will concentrate on Measurement in the evaluation context, covering methods for developing measures for fidelity and dose, assessing reliability and validity of program measures, integrating administrative data into analyses, and choosing appropriate outcome measures, and statistical methods for outcome analysis that can enhance the internal validity of an evaluation and often compensate for a lack of randomization.

Prerequisites: PHM 1120, PHD 1420, PHD 1421 or equivalent, statistical training through multiple regression; Recommended: PHD 1130. If required courses were taken elsewhere or in departments other than HPBS, provide syllabi to instructor for approval.

PHD 1122 *Health Promotion Theories for Individuals and Groups: Part I*

3 credits

This course provides HPBS doctoral students with an overview of the application of selected behavioral science theories and models used in health education and health promotion programs directed toward individuals and groups. The goals for this class are to provide students opportunities to apply behavioral

science theories and models to the development of interventions for health problems and to improve scientific writing skills. Students will demonstrate their ability to use theory for understanding a health issue and improve scientific writing skills through written assignments.

PHD 1123 *Community Health Promotion Theory and Practice*

3 credits

This required course for DrPH students in Health Promotion & Health Education aims to build students' knowledge and skills in community health promotion research and practice via exploration and application of community and environmental-level health promotion theories, community health promotion planning models, and community/environmental-level health promotion change methods that include participatory problem solving, coalition building, and advocacy. Students will engage in diverse learning activities and the development of an NIH community health promotion research funding proposal.

Prerequisites: PHM 1110 or equivalent

PHD 1130 *Applied Measurement Theory*

3 credits

This course introduces students to the basic aspects of psychometric theory, with an emphasis on the development of valid and reliable measurement scales. The course covers classical test theory; generalizability theory; common scaling methods; Item Response Theory (IRT); analytic methods relevant to scale construction; and survey construction, design, and administration. Students have an opportunity to become familiar with various statistical approaches and software used to assess psychometric properties of scales as well as with strategies for survey construction and administration.

Prerequisites: PH 1700 or equivalent

PHD 1132 *Latent Variable Models and Factor Analysis*

3 credits

This course helps students develop the skills and understanding necessary to use and apply several statistical techniques included under the umbrella of Latent Variable Analysis. The course covers Exploratory and Confirmatory Factor Analysis, Path Analysis, Structural Equation Modeling, Assessment of Measurement Invariance, and Latent Growth Curve Modeling. The course focuses on the application of these methods in public health, reading and understanding research studies that use these methods, and developing research reports and presentations from analyses they have conducted.

Prerequisites: PH 1700, PHD 1421, or consent of instructor. The completion of an applied multivariate statistics course is strongly recommended.

PHD 1227 *Health Promotion Theories for Individuals and Groups: Part II*

3 credits

This doctoral level course provides an advanced review of theories of health behavior typically used for the development of health behavior interventions. This course provides an overview of the philosophy of science, offers an in-depth exploration of theory and public health, and introduces theory evaluation and testing. It also presents emerging concepts of strategic importance to health behavior research. This course complements PHD 1420 and PHD 1421, and elaborates and expands on critical issues presented in PHM 1110, PHM 1111, and PHD 1122, with an emphasis on understanding the role of theory in behavioral research.

Prerequisites: PHM 1110 or PHM 1111 and PHD 1122 (or equivalent), PH 1700.

PHM 1229 *Medical Nutrition Therapy Simulation Lab*

2 credits

This course, in the simulation lab in Houston, will offer the student the opportunity to learn the process for nutrition focused physical assessment and the assessment process of malnutrition. In a realistic treatment

setting with a computer-controlled and instructor-manipulated mannequin “patient,” students will learn specific clinical skills leading to proficiency in clinical judgment and performance. Behavioral-based strategies for counseling relating to nutrition will also be included in this course.

Prerequisites: Currently enrolled in Dietetic Internship Program – MPH/Dietetic Intern, MD/MPH, or RN/MPH. This course is only available in Houston.

PHM 1231 *Advances in Medical Nutrition Therapy*

4 credits

This advanced course focuses on the assessment and nutritional management of persons with conditions requiring medical nutrition therapy in general medicine and critical care. Specialized nutritional needs and principles of clinical management are covered.

Prerequisites: Consent of instructor

PHM 1232 *Public Health Nutrition Practice*

3 credits

This course presents an overview of the roles, responsibilities, skills, and career opportunities of the public health nutritionist. Topics include review of nutrition education literature; development of behaviorally-based nutrition education materials; identification of community nutrition-related assets and resources; nutrition in public health, evaluation of nutrition programs; nutrition policy and food assistance programs; food security; and the effects of culture on food consumption. Applications of national dietary goals to various population groups are presented, with a focus on underserved populations.

PHM 1234 *Advances in Specialty Nutrition Practice*

2 credits

This advanced course is required for Dietetic Internship students. It exposes students to selected areas of specialty dietetics practice, including lectures from practicing dietetic specialists and culinary medicine – community training. Information for professional dietetic practice will also be covered, including Review for the Registration Examination for Dietitians, Licensure Acts, and preparation of a Professional Development Portfolio.

Prerequisites: Currently enrolled in Dietetic Internship Program and concurrently enrolled in Public Health Practicum: Dietetic Internship Supervised Practice Rotation.

PH 1236 *Issues in Aging*

3 credits

This course surveys the biological, psychological, sociological, and behavioral phenomena of aging. Students will participate in an interdisciplinary group discussions and critical thinking activities with experts from the aging field to acquaint them with the broad spectrum of issues in aging including ageism, normal versus disease related aging, sexuality, falls, frailty, abuse and neglect and death and dying.

PH 1237 *Obesity, Nutrition, & Physical Activity*

1 credit

This seminar course provides a forum for students to learn to critically review the research literature in the areas of obesity, nutrition, and physical activity. Topics will vary and will be driven by the current published literature and emerging areas of research. Seminars will be set up in an informal manner, with faculty leading the first session and students assuming the lead later in the semester. Review of papers will be accompanied by in-depth discussions focusing on study design and analysis and interpretation of results, as well as on the relationship of the paper to the existing body of knowledge.

PH 1238 *Adolescent Sexual Health*

3 credits

This course explores issues and controversies related to adolescent sexual health in the United States. This course will provide a broad perspective on adolescent sexual health, sexuality education, what the research indicates is effective and how young people are affected by its implementation, and advocacy for adolescent sexual health. Topics covered include prevalence of adolescent pregnancy, STIs, HIV; sex in the media; sexual diversity; effective programs; answering hard questions; adolescent cognitive development; Texas and U.S. laws; contraceptives; and healthy relationships.

PHD 1239 *Theories of Child and Adolescent Development*

3 credits

This course is limited to doctoral students, but interested MPH students who have a strong background in child and adolescent health may be eligible to enroll. This course provides doctoral students with a foundation in historical and contemporary theories of developmental science and explores how these theories facilitate our understanding of normative development from infancy through adolescence. In addition, the course will utilize developmental theories to examine the factors contributing to public health problems that affect children and youth, as well as the development and implementation of public health interventions serving these populations.

Prerequisites: For doctoral students only

PH 1241 *Disability and Public Health*

3 credits

This course explores a variety of issues that affect the ability of individuals with disabilities to be healthy in the context of living with their disability. Today, about 58 million Americans live with disabilities, and this number is expected to increase. Unlike previous generations, the life expectancy of those living with a disability now approximates that of the general population, and passage of the Americans with Disabilities Act of 1990 has increased employment opportunities and participation in community life. In order to fully take advantage of these opportunities, people with disabilities need to remain healthy. Evidence, however, demonstrates that people with disabilities experience substantial health disparities, and that public health has mostly overlooked this underserved group. Topics to be covered include existing federal legislation protecting the rights of individuals with disabilities, surveillance, issues related to access and health care services, evidence regarding lifestyle behaviors and preventive health practices, and approaches for promoting health and reducing disease.

PH 1250 *Current Methods for the Prevention of Sexually Transmitted Infections*

3 credits

This course examines historical and current approaches to STI prevention. Students will be able to describe the biological basis of the disease or disease process, the epidemiology and social determinants of the infection, with emphasis on cross-cultural differences, and the implications of these for health promotion and disease prevention programs, as well as the design and impact of existing programs. Students will also learn how to write a grant application for a community-based organization serving most-at-risk populations. This course is recommended for students interested in working in the field of sexual health education and STI prevention. This course complements PH 1238 Adolescent Sexual Health and other related special topics courses.

PH 1300 *Public Health Communication*

3 credits

In this course each student selects a significant public health challenge involving behavior and policy/environmental change that can be promoted and advocated through media communication. For their selected topics, students learn how to define audiences and aims, set objectives, select strategies, and design

products for an evidence-based multi-component communication plan – with guided practice of skills including news media engagement and public relations, writing and graphic arts for low-literacy audiences, constructing theory/evidence-based logic models, audience research and social marketing analysis, and use of new social and mobile media.

Prerequisites: PH 1110 or PH 1111, or equivalent

PH 1321 *Social Networks and Health*

3 credits

This course provides students an opportunity to gain practical use and insight into understanding and conducting research that uses social network analysis, as well as, provide students with practical applications of analytical techniques using appropriate software. Topics include theory, research design, data collection, sampling methods, quantitative descriptions of networks, statistical modeling of networks, and example interventions relevant to various disciplines in public health.

Prerequisites: PHM 1690 or PH 1700; and PHM 2610, PHM 2612, PH 1420, or PH 1421. A basic theoretical statistics, categorical data analysis, or generalized linear model course are also recommended – taken prior to or concurrently with this course.

PH 1324 *Applied Discrete Data Analysis using Stata*

3 credits

This course provides students an opportunity to gain practical use and obtain discrete data analytic techniques, including data management and various regression methods for the analysis of categorical outcome variables using Stata 14 statistical software. Topics include the logistic regression model, sampling methods, model building strategies, assessing model fit, multiple logistic regression, and Poisson regression, and some extensions of generalized linear model. This course will provide students with practical applications of these statistical methods using Stata commands.

Prerequisites: PH 1700, PH 1421, or the equivalent. A basic theoretical statistics course is also highly recommended – either completed prior to or concurrently with this course.

PH 1350 *Ethnicity, Race, Class & Gender: A Multicultural Public Health Perspective*

3 credits

This seminar-style course explores contemporary perspectives on ethnicity, race, social class and gender, as well as the way these social identities are portrayed in the public health literature, particularly in the health disparities domain. The course will also review basic social science definitions of culture, multiculturalism, and social identity. Students are expected to demonstrate in an oral presentation and in two take-home examinations, how concepts learned in class may be used to understand, review, and critique public health research conducted in the United States and in a global context.

Prerequisites: PHM 1110 or PHM 1111 and/or background in the social or behavioral sciences

PH 1410 *Addiction and Society*

3 credits

This seminar examines contemporary and historical understandings of an approaches to drug use across the globe. Evolving and contested theories of addiction will be critiqued as students examine the ways that ideas about drug use and treatment emerge in different temporal and geographical contexts and are informed by cultural ideas and representations, socioeconomic and political systems, available treatment options, and location, state, and global policy decisions. Students will examine the intersecting relationships between the socioeconomic and political situations, emerging practices in drug using populations in different locales, and issues related to ideas about health, criminality, deviance, and authorities' perceived needs for social control. Readings and discussions will explore the controversies surrounding the U.S. drug war, current treatment models, and harm reduction campaigns that illustrate

the ways that different groups in diverse communities across the globe work to create new ways of responding to drug trafficking and drug use.

PHD 1420 *Quantitative Research Design for Behavioral Sciences*

3 credits

This course equips students with the skills to develop research questions appropriate to the behavioral sciences that can be translated into testable hypotheses and feasible, effective research designs. Students are exposed to a variety of research design elements through published journal articles, and are expected to learn to evaluate and compare the suitability of different study designs to test specific hypotheses. A key aspect of evaluating research design is identifying potential threats to internal and external validity, as well as examining statistically conclusion validity and construct/measurement validity that are present in greater or lesser degree in all research designs, including observational, experimental, and quasi-experimental designs. Assignments and exams will focus on developing the skills to construct valid research designs appropriate to the proposed research question.

Prerequisites: Consent of instructor

PHD 1421 *Quantitative Analysis for Behavioral Sciences*

3 credits

This course expands on the material covered in PHD 1420 and focuses on the choice and implementation of statistical analyses that assess differences between groups, relationships among variables, prediction of outcomes, and measurement reliability and validity. This course primarily covers the application of statistical methods that are designed to be used with quantitative dependent variables. Emphasis is placed on reading and understanding scientific journal articles that make use of these methods, appropriate use of statistical software for conducting analyses, interpreting the output from these analyses, and presenting the results of analyses in both oral and written form.

Prerequisites: PH 1700 (or equivalent) and PHD 1420 or consent of instructor

PH 1424 *Social Justice and Public Health*

3 credits

With people from multiple historically oppressed and marginalized groups as the focal point, this seminar examines how multiple social identities, including race/ethnicity; gender, sexual orientation, SES, and disability, intersect at the micro level of individual experience to reflect interlocking systems of privilege and oppression (i.e., racism, sexism, heterosexism, classism) at the macro social-structural level and produce disparate health outcomes. Discussion will center around theory and research from Disability studies, feminism, and Critical Race Praxis (PHCRP) to promote an understanding of how multiple identities and analytical categories intersect to create health disparities that require multifaceted policy and intervention approaches that address the ways that all facets of an individual's and community's identity intersect with social discrimination and in turn affect their health. The course explores local and global controversies and examines strategies to address them including community mobilization, coalition building, community-based participatory research, and community-level advocacy.

PHD 1425 *Applied Multivariate Methods for the Behavioral Sciences*

3 credits

This applied course is designed for students who are interested in applied multivariate methods for research in the social and behavioral sciences. Topics will include multiple regression, multivariate analysis of variance and covariance, discriminate function analysis, cluster analysis, factor analysis, and other relevant multivariate methods. The emphasis will be on a conceptual understanding of these methodologies and their assumptions, implementation using standard statistical packages, and interpretation of output. Students should be familiar with elements of research design and have completed a basic statistical sequence covering univariate methods and hypothesis testing.

PHD 1430 *Systematic Review, Meta-Analysis, and Evidence-Based Public Health*

3 credits

This course introduces the methods of systematic review and meta-analysis, including formulating questions, criteria for relevance and rigor in selecting primary studies, search strategies, coding protocols, tables and other formats for presenting data, qualitative and quantitative representations of effect sizes from individual primary studies, and analyses of groups of studies to estimate an average effect size and to explain variation. (A STATA-based lab experience in meta-analysis has been added to the course.) Each student works on his/her own project with the goal of producing a complete proposal/protocol and taking preliminary steps in all phases of the systematic review process.

Prerequisites: PH 1700 or consent of the instructor and PHM 2610 or equivalent

PHD 1431 *Tools and Methods for Systematic Reviews and Meta-Analyses*

2 credits

This intensive short-course is designed to introduce students to best practices, resources, and methods for systematic reviews and meta-analyses, and to guide students through the steps of a systematic review. The course uses examples from a wide variety of completed reviews as well as exercises and readings. The format includes face-to-face (in-person/ITV) and online exercises, readings, and recorded lectures. (A STATA-based lab experience in meta-analysis has been added to the course.) Course resources and materials are available throughout the semester to assist students in applying them to a Integrative Learning experience or dissertation. Students who expect to continue with their own reviews and to receive further support and instruction should enroll in independent study with Dr. Mullen and Ms. Vonville. Students who wish to enroll in the meta-analysis module only should enroll for PHD 1861.

Prerequisites: PH 1700 or consent of the instructor and PHM 2610 or equivalent

PH 1433 *Research Seminar in Health Promotion and Behavioral Sciences*

1 credit

This seminar course provides the opportunity to learn about faculty and student research in HPBS. Faculty and students will present aspects of planned, ongoing, and completed research. There will be opportunities for discussion and feedback. Presentation of projects in process for which investigators are seeking constructive criticism is encouraged. All students in the Department of HPBS must enroll for the departmental research seminar at least one semester during their degree program. It is strongly recommended that students enroll early in their coursework in order to learn more about the kinds of health promotion research engaged in by the faculty at the school and neighboring institutions.

PHD 1435 *Health Promotion/Behavioral Sciences Doctoral/Post-doctoral Research Seminar*

2 credits

This seminar course affords the opportunity for doctoral students and post-doctoral fellows to improve their research skills and increase their scientific productivity in the formulation of research proposals and journal publications and presentations at scientific meetings. Participants present their work-in-progress. This course provides opportunities to involve mentors (e.g., advisers, dissertation supervisors, committee members) and to practice mentoring and teaching with other participants. This course may be repeated for credit.

Prerequisites: Doctoral student or post-doctoral fellow in HPBS or consent of instructor

PH 1498 *Special Topics in Health Promotion and Behavioral Sciences*

Credit hours vary among Special Topics courses

Special Topics vary each semester and provide in-depth study of HPBS faculty research.

PH 1499 *Independent Study in Health Promotion and Behavioral Sciences*

1-9 credits

A plan of study is determined for each participating student and supervised by a member of the HPBS faculty. This course may be repeated for credit. All independent study courses are required to have learning objectives and an outline of learning activities.

MANAGEMENT, POLICY AND COMMUNITY HEALTH

The Department of Management, Policy and Community Health (MPACH) provides instruction in the fields of health economics, health services research, health policy, health law, health management and administration, health planning, community health practice, public health leadership, population health, organization management, health disparities, economic and social determinants of health, and health and economic development.

Minor in Health Economics

The department offers a minor course of study (nine (9) semester credit hours) for MPH, MS, DrPH, and PhD students majoring in other public health disciplines. Student select three courses for a minor in Health Economics from the approved list: **PHD 3910** *Health Economics*; **PH 3915** *Methods for Economic Evaluation of Health Programs*; **PH 3922** *Economic and Social Determinants of Health*; **PHD 3930** *Econometrics in Public Health*; **PHD 3931** *Advanced Econometrics*; **PHD 3935** *Advanced Health Economics*; **PH 3998** *Decision Analysis*

Minor in Health Services Research

The department offers a minor course of study (nine (9) semester credit hours) for MPH, MS, DrPH, and PhD students majoring in other public health disciplines. Student select three courses for a minor in Health Services Research from the approved list: **PH 3920** *Health Services Delivery and Performance*; **PHD 3926** *Health Survey Research Design*; **PH 3940** *Healthcare Outcomes and Quality Research*; **PHD 3945** *Advanced Health Services Research Methods*; **PH 3998** *Decision Analysis*

Minor in Health Policy

The department offers a minor course of study (nine (9) semester credit hours) for MPH, MS, DrPH, and PhD students majoring in other public health disciplines. Student select three courses for a minor in Health Policy from the approved list: **PHD 3810** *Health Policy in the United States*; **PHD 3812** *Comparative Healthcare Systems: Policy Challenges and Economic Perspectives*; **PH 3815** *Health Policy Analysis*; **PH 3738** *Legal Issues in Healthcare*; **PHD 3830** *Ethics and Policy*; **PH 3736** *U.S. Healthcare Payment Systems and Policy*

Minor in Healthcare Management

The department offers a minor course of study (nine (9) semester credit hours) for MPH, MS, DrPH, and PhD students majoring in other public health disciplines. Students complete a Healthcare Management related **PH 9997** *Practicum* course & select three courses for a minor in Healthcare Management from the approved list:

- Masters and DrPH students: **PHM 3744** *Organizational Behavior and Human Resource Management in Health Services Organizations*; **PHM 3746** *Evaluation and Improvement of Healthcare Quality*; **PHM 3720** *Healthcare Finance*; **PH 3747** *Healthcare Operations Management*; **PH 3735** *Healthcare Strategic Management*
- PhD students: **PHD 3846** *Quality Management and Improvement in Healthcare*; **PHD 3721** *Healthcare Finance*; **PHD 3998** *Operations, Technology & Decision Management*; **PHD 3946** *Strategy, Governance, and Leadership*; **PHD 3743** *Organizational and Management Theory*

Minor in Community Health Practice

The department offers a minor course of study (nine (9) semester credit hours) for MPH, MS, DrPH, and PhD students majoring in other public health disciplines. Student select three courses for a minor in Health Policy from the approved list:

- Masters students: **PHM 3630** *Health Program Planning, Implementation, and Evaluation*; **PH 3998** *Community Assessment Principles, Methods, and Technologies*; **PHM 3922** *Economic and Social Determinants of Health*; **PHM 3620** *Principles and Practice of Public Health*
- Doctoral students: **PHD 3998** *Working with Diverse Communities* OR **PHM 3800** *Working with Diverse Communities* & **PHD 3998** *Community Engagement and Community-Based Participatory Research* & **PHD 3998** *Practice-Based Methods and Design*

Centers

The Department of MPACH is home to six centers organized by two themes: The Texas Public Health Training Center, which is approved by the Texas Department of State Health Services as a Certified Training Center for Community Health Workers and the National Center for Healthy Homes. The Center for Management and Policy in Population Health includes the Institute for Health Policy, the Center for Health Services Research (CHSR), the Center for Healthcare Data Research and the George McMillan Fleming Center for Healthcare Management. Further information about these centers can be found in the “Centers” section below and on the UTHealth School of Public Health website.

Master of Public Health (MPH) Degree Programs

Special Entrance Requirements

Applicants to the MPH program should hold an undergraduate and/or graduate degrees in one of a variety of areas, including the social and behavioral sciences, business, the biological and medical sciences, law, and/or quantitative methods. See the ‘Application Process & Deadlines’ and ‘Admissions Process’ sections for more information.

Community Health Practice

The MPH in Community Health Practice is a minimum of 45 semester credit hours and focuses on the application of public health sciences at the community level. Faculty and students are concerned with the assessment of population health; the planning, implementation, and evaluation of health programs in community settings; and the appraisal of community-level effects of health policies and programs. The teaching program emphasizes systematic analysis and appropriate use of quantitative and qualitative health data. Students develop and enhance their skills by examining community health issues in the classroom and the community.

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Community Health Practice:

- MPH Core: **PHM 1690**, **PHM 2612**, **PHM 3715**, **PHM 1110**, **PHWM 2110** & **PHM 5015**
- Major Courses: **PHM 3620** *Principles and Practice of Public Health* & **PHM 3630** *Health Program Planning, Implementation, and Evaluation* & **PH 3800** *Working with Diverse Communities* & **PHM 3922** *Economics and Social Determinants of Health* & **PH 3998** *ST: Community Assessment Concepts, Methods and Techniques*
- Electives
- Applied Practice Experience: **PH 9997** *Practicum*
- Integrative Learning Experience: *Capstone* OR **PHM 9998** *Thesis Research*

Health Services Organizations

The MPH in Health Services Organization is a minimum 45 semester credit hours and emphasizes the planning, management, and evaluation of health service systems, services, technologies, and policy. The curriculum includes health economics, decision analysis, health services research, public health and

legislative processes, survey research, outcomes research, quantitative methods, evaluation research, health disparities and vulnerable populations, health administration, economic and social determinants of health, utilization of health services, and ethical and legal aspects of public health.

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Health Services Organizations:

- MPH Core: **PHM 1690, PHM 2612, PHM 3715, PHM 1110, PHWM 2110 & PHM 5015**
- Major Courses: **PHM 3910 Health Economics & PH 3915 Methods for Economics Evaluation of Health Programs & PH 3920 Health Services Delivery and Performance & PH 3940 Healthcare Outcomes and Quality Research OR PHM 3746 Evaluation and Improvement of Healthcare Quality OR PH 3998 ST: Quality, Cost and Value Evaluation in Healthcare & PH 3815 Health Policy Analysis OR PHD 3930 Econometrics & PHM 3810 Health Policy in the United States OR PH 3818 Texas Health Policy**
- Electives
- Applied Practice Experience: **PH 9997 Practicum**
- Integrative Learning Experience: *Capstone* OR **PHM 9998 Thesis Research**

Healthcare Management

The MPH in Healthcare Management is a minimum 45 semester credit hours and is designed to provide students with a solid foundation in management in an interdisciplinary public health environment and a basis for understanding key managerial functions within the broad spectrum of public health systems. A distinctive characteristic of this degree program is recognition of the importance of linking private sector healthcare institutional management with public sector healthcare management and related community initiatives.

Course of Study

The following program courses are required, except in the case of a waiver (waiver process varies by program), for an MPH student majoring in Healthcare Management:

- MPH Core: **PHM 1690, PHM 2612, PHM 3715, PHM 1110, PHWM 2110 & PHM 5015**
- Major Courses: **PHM 3744 Organizational Behavior and Human Resource Management in Health Services Organizations OR PHD 3743 Organizational and Management Theory & PHM 3746 Evaluation and Improvement of Healthcare Quality OR PH 3845 Quality, Cost and Value Evaluation in Healthcare & PHM 3718 Accounting for Healthcare Management & PHM 3720 Healthcare Finance & PH 3735 Healthcare Strategic Management & PH 3736 U.S. Healthcare Payment Systems and Policy & PH 3738 Legal Issues in Healthcare & PH 3747 Healthcare Operations Management**
- Electives
- Applied Practice Experience: **PH 9997 Practicum**
- Integrative Learning Experience: *Capstone* OR **PHM 9998 Thesis Research**

For a sample of the course of study for an MPH in MPACH in any one of these majors, please see the degree planner at <https://sph.uth.tmc.edu/academics/degree-programs/master-of-public-health-mp/h/>.

Doctor of Public Health (DrPH) Degree Program

The DrPH in Community Health Practice is a minimum of 48 semester credit hours and offers interdisciplinary training for students who want to practice at an advanced level or pursue academic careers in community health practice.

Special Entrance Requirements

Applicants to the DrPH program should have a prior MPH degree or its equivalent. Preferred applicants are those with public health work experience and those who have completed coursework in quantitative methods or who can provide evidence of quantitative abilities. All DrPH students are expected to have completed PH 1700 Intermediate Biostatistics or its equivalent. In exceptional cases, applicants without the required academic background in public health may be accepted on the condition of additional coursework in public health. See the 'Application Process & Deadlines' and 'Admissions Process' sections for more information.

Course of Study

The following courses are required, except in the case of a waiver (the waiver process varies by program), for a DrPH student majoring in Community Health Practice:

- Before Preliminary Exam: **PHD 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)* & **PHD 1120** *Program Evaluation* & **PH 2615** *Epidemiology II* & **PH 3998 ST: Practice-Based Methods and Design** & **PH 3998 ST: Community-Based Grant Writing Workshop** & **PHD 3998 ST: Community Engagement & CBPR**
- Major Courses: **PH 1700** *Intermediate Biostatistics* & **PHD 3620** *Principles and Practice of Public Health* & **PHD 3800** *Working with Diverse Communities (Social Justice)* & **PHD 3830** *Ethics and Policy* & **PHD 3950** *Advanced Leadership Studies in Public Health* & **PH 3998 ST: Advocacy for Public Health**
- One breadth and one minor or two minors
- Applied Practice Experience: **PH 9997** *Practicum*
- Dissertation: **PHD 9999** *Dissertation Research*

All students pursuing a PhD or DrPH in Community Health Practice must pass the preliminary examination and dissertation proposal defense for admission to doctoral candidacy. The final degree requirement is the completion of an original research dissertation, agreed upon with the dissertation committee, which the doctoral candidate will present and defend in a public forum at the school.

For a sample of the course of study for a DrPH in Community Health Practice, please see the degree planner at <https://sph.uth.tmc.edu/academics/degree-programs/doctor-of-public-health-drph/>

The Doctor of Philosophy (PhD) Degree Program

The PhD program in MPACH is a minimum of 48 semester credit hours and provides tracks in two areas: Health Economics/Health Services Research and Healthcare Management/Health Policy. Students interested in careers in these areas may pursue advanced study that leads to original research and culminates in the award of the PhD degree.

Special Entrance Requirements

Applicants to the PhD program must have an appropriate post-bachelor's degree in the social sciences, policy, law, management, clinical sciences or public health. Also, applicants must have an advanced knowledge of quantitative methods; preferred applicants with strong math and/or statistics backgrounds. See the 'Application Process & Deadlines' and 'Admissions Process' sections for more information.

Health Economics/Health Services Research

Course of Study

The following Departmental courses are required, except in the case of a waiver (the waiver process varies by program), for PhD students majoring in Health Economics/Health Services Research:

- Before Preliminary Exam: **PHD 3910** *Health Economics* & **PH 3915** *Methods for Economic Evaluation of Health Programs* & **PH 3920** *Health Services Delivery and Performance* & **PHD 3926**

Health Survey Research Design & PHD 3930 Econometrics in Public Health & PH 3940 Healthcare Outcomes and Quality Research

- Select a Track:
 - Health Economics Track: **PHD 3935** *Advanced Health Economics*
 - Health Services Research Track: **PHD 3945** *Advanced Health Services Research Methods*
 - Additional Required Courses for Either Track: **PHD 3935** *Advanced Health Economics* OR **PHD 3931** *Advanced Econometrics* OR **PH 3957** *Topics in Health Economics* OR **PH 3812** *Comparative Healthcare Systems & Policy* OR **PH 3998 ST**: *Claims Data in Health Services Research* OR **PHD 3922** *Economic and Social Determinants of Health* OR **PHD 3970** *Proposal Development MPCH*
- Required Course: **PHM 2612** *Epidemiology I* OR **PHD 3620** *Principles and Practice of Public Health*
- One breadth and one minor or two minors
- Dissertation: **PHD 9999** *Dissertation Research*

Healthcare Management

Course of Study

The following departmental courses are required, except in the case of a waiver (waiver process varies by program), for PhD students majoring in Healthcare Management:

- Leveling Course: **PH 1700** *Intermediate Biostatistics*
- Before Preliminary Exam: **PHD 3743** *Organizational and Management Theory* & **PH 3815** *Health Policy Analysis* & **PHD 3731** *Healthcare Management and Policy Research* & **PHD 3846** *Quality Management and Improvement in Healthcare* & **PHD 3721** *Healthcare Finance* & **PHD 3810** *Health Policy in the United States*
- Select an Emphasis:
 - Healthcare Management Emphasis (select 2): **PHD 3946** *Doctoral Strategy, Governance, and Leadership* OR **PHD 3940** *Healthcare Outcomes and Quality Research* OR **PHD 3910** *Health Economics* OR **PH 3738** *Legal Issues in Healthcare* OR **PH 3747** *Healthcare Operations Management* **PHD 3812** *Comparative Healthcare Systems and Policy* OR **PHD 3922** *Economic & Social Determinants of Health* OR **PH 3736** *Healthcare Payment Systems and Policy*
 - Health Policy Emphasis (select 2): **PHD 3830** *Ethics and Policy* OR **PH 3915** *Methods for Economic Evaluation of Health Programs* OR **PH 3738** *Legal Issues in Healthcare* OR **PH 3736** *U.S. Healthcare Payment Systems and Policy* OR **PHD 3812** *Comparative Healthcare Systems and Policy* OR **PH 3818** *Texas Health Policy: Emerging Issues of Health Program*
- Required Course: **PHM 2612** *Epidemiology I* OR **PHD 3620** *Principles and Practice of Public Health*
- One breadth and one minor or two minors
- Dissertation: **PHD 9999** *Dissertation Research*

All students pursuing a PhD in MPACH must pass the preliminary examination and dissertation proposal defense for admission to doctoral candidacy. The final degree requirement is the completion of an original research dissertation, agreed upon with the dissertation committee, which the doctoral candidate will present and defend in a public forum at the school.

For a sample of the course of study for a PhD in MPACH in any one of these tracks, please see the sample degree planner at

<https://sph.uth.tmc.edu/academics/degree-programs/doctor-of-philosophy-phd/>.

Courses, Management, Policy and Community Health

PHM 3620 *Principles and Practice of Public Health*

4 credits

PHD 3620 *Principles and Practice of Public Health*

4 credits

This course illustrates how the health of populations is promoted and protected by organized public health practice. Students are acquainted with current evolving concepts and performance of public health practice, and are introduced to essential public health services performed by public health agencies. Students will learn expectations of the effective and efficient performance of agencies and the competencies required of individual public/community health workers. Representatives from community/public health programs will participate in class presentations along with faculty.

PHM 3630 *Health Program Planning, Implementation and Evaluation*

3 credits

This course introduces students to the fundamental concepts and techniques of planning, implementing, and evaluating public health programs. The course will cover concepts that are relevant to evaluation of health interventions, as well as social and behavioral interventions, in the community settings. These will include program/intervention; implementation and impact evaluation concepts; models/designs; methods; indicators; and data collection, analysis, and interpretation strategies. Design and application of evaluations will include both quantitative and qualitative research methods.

PHW 3660 *Demographic Data Methods for Public Health Practitioners*

4 credits

This course provides an overview of demographic methods commonly used by professionals in public health practice and research. This course is an interactive, graduate-level electronic seminar. Students will be introduced to age-, sex-, ethnicity-, and cause-specific death rates; period rates and cohort rates; methods of standardization of rates and proportions and selection of standards; the life table and some of its uses; common fertility and reproductivity rates; uses of data from the birth certificate; mobility data and measures; and population estimates and projections.

PHM 3715 *Management and Policy Concepts in Public Health*

3 credits

This course provides an overview of theory and practice in the management and policy sciences applied to the field of public health. Topics include public health in the U.S. health system/legal bases of public health, public policy institutions, planning and management to promote health, emergency preparedness, public sector institutions, management, and decision-making. Students will gain skills in oral and written communication with individual and group projects.

PHM 3718 *Accounting for Healthcare Management*

2 credits

This course covers relevant topics in financial accounting and management. Students will improve their understanding of financial accounting principles and will learn different analytical approaches for evaluating financial performance in the healthcare sector. In addition, it will enable students to demonstrate a mastery of key theories and principles of healthcare accounting and to apply ethical decision making in financial management.

PHM 3720 *Healthcare Finance*

2 credits

This course offers students the opportunity to improve their understanding and use of financial concepts and principles in the health care industry. Financial management under prospective payment and capitation systems, as well as product costing and pricing, are included. The lecture format will be augmented by student readings, homework assignments, and class discussion. Students are expected to attend class, participate in discussions, and complete homework assignments.

PHD 3721 *Healthcare Finance*

3 credits

This course offers doctoral students the opportunity to improve their understanding and use of financial concepts and principles in the health care industry, and to consider anticipated changes due to health care reform. Managerial and financial accounting, as well as financial analysis and strategic planning, are covered. Financial management under prospective payment and capitation systems, as well as product costing and pricing, will be emphasized.

PHD 3731 *Healthcare Management and Policy Research*

3 credits

This course prepares students to conduct research with academic rigor. Students are exposed to different research methods prevalent in healthcare management and policy disciplines through assigned readings (research articles and unpublished dissertations). In addition, the course emphasis is on manuscript writing, designing a feasible study grounded in theory or conceptual framework and based on publicly available data sources, comprehensive literature review, selection of appropriate research methods, and identification of potential analytical issues and methodological solutions.

Prerequisites: PH 1700, PHM 3744, and PHD 3930

PH 3735 *Healthcare Strategic Management*

3 credits

This course focuses on the development and implementation of strategy by health care organizations in the changing healthcare marketplace. The course stresses practical approaches to articulate an organization's mission and vision and to formulate strategies that fit the external and internal situation. In addition, basic principles of community-based health planning are examined, and the potential linkages between organizational strategic planning and population health are explored.

This is a required course for the healthcare management MPH program.

PH 3736 *U.S. Healthcare Payment Systems and Policy*

3 credits

This course reviews current U.S. healthcare policy in terms of the national healthcare system and the various payments systems. This course builds on system theory and examines the unique approach in the US and how it is changing. In the United States, payment systems are provided in the form of private or public insurance plans, or other forms of group coverage that are offered to eligible populations. Each healthcare payment system will be examined in depth to reveal the policies that serve as the foundation of the program; the authority, the economics, the targeted population, and the current challenges. Students will apply systems theory and policy concepts to theoretically redesign the U.S. healthcare system.

PH 3737 *Cost-effectiveness for Public Health Interventions*

2 credits

This course is an applied introduction to cost-effectiveness. The students will compare and contrast cost-benefit, cost of illness, and cost-effectiveness. The course will cover study design, costs including opportunity costs, estimating life-expectancy including quality adjustment, and conducting sensitivity

analyses. Students will present applied examples of studies, and will write a proposal to assess an intervention, policy, or regulation.

PH 3738 *Legal Issues in Healthcare*

3 credits

This course provides an overview of legal and ethical issues facing the health care industry and examines legal and ethical issues in the administration of health care programs. Students will gain a working knowledge of how to apply federal and Texas health laws and regulations to real-world problems. Components studied include: key legal process and resources, ethical issues of concern to health providers, medical staff issues and peer review, quality and malpractice concerns, legal and ethical issues related to access to healthcare, end of life issues, reproductive health, role and structure of hospital ethics committees, tort law and professional liability, fraud and abuse, governmental regulation, informed consent, confidentiality and medical records, and ethical decision-making.

PHD 3743 *Organizational and Management Theory*

3 credits

This course helps doctoral students to develop frameworks for thinking about the world of health care organizations and its complexity. The specific emphasis will be health services organizations and management research, with an emphasis on organization theory. Organization theory is a set of approaches to the understanding of how organizations form, survive and grow, interact with each other, recruit and process members, gain and manage resources, and deal with internal and external problems. The primary goals of this course are to apply relevant theories to a range of organizational problems and to attain skills needed to be an effective researcher in health services organization and management research.

PHM 3744 *Organizational Behavior and Human Resource Management in Health Services Organizations*

3 credits

This course provides students with an application of organizational behavior theory; models to analyze; and evaluation factors that affect behavior, performance, and job satisfaction of people working in organizations. This course exposes students to a body of knowledge and equips them with skills needed to successfully manage and lead health services organizations. It focuses on applying different approaches for managing individuals, teams, and organizations to achieve organizational excellence.

PHM 3746 *Evaluation and Improvement of Healthcare Quality*

3 credits

This course provides students with requisite knowledge and skills for understanding, evaluating, and improving clinical and operational processes, as well as healthcare outcomes both within an organization and across a population. Qualitative and quantitative approaches to quality management and improvement are examined through historical perspectives, real-world cases, and didactic exercises.

PH 3747 *Healthcare Operations Management*

3 credits

This course introduces students to key management functions, processes, issues, and challenges currently face by health care agencies and organizations. This course uses more advanced methods to improve healthcare processes and outcomes. Specific focus will vary but may include: understanding how organizational context influences processes and patient care; problem-solving and using key tools such as SWOT or gap analysis; understanding how policies and regulations affect operations; making process improvements (e.g. reducing hospital readmissions); understanding performance measure and how these are used for mandatory reporting and tacking program or patient outcomes; and learning about tools, concepts of techniques used to improve management performance.

PHD 3748 *Advanced Case Applications in Healthcare Finance*

3 credits

This advanced doctoral-level course provides students with the opportunity to evaluate and select appropriate financial management and accounting tools for application in solving typical health care organizational financial challenges, using a case study approach. Students will be required to synthesize financial concepts and consider organization behavior ramifications in recommending workable solutions to each case. The goal of the course is to offer students a variety of health care business problems encapsulated in cases solved using skills drawn from financial theories and models. Cases reflect common decisions faced by both financial and non-financial healthcare administrators.

PH 3749 *Information Technology in Healthcare Management*

3 credits

This course provides an overview of essential operational processes in a healthcare organization and the application of information technology (“IT”) resources to those processes. Students will be introduced to different health IT systems used at individual, organizational, interorganizational, and state or national levels. Additionally, management of health IT resources will also be discussed.

PHD 3750 *Policy Issues in Health Information Technology*

3 credits

This doctoral-level course will critically examine policy and regulatory issues related to the use of information technology (IT) in healthcare. The course will focus on three broad topical areas of health IT: clinical, consumer, and population health informatics. While the primary emphasis will be on the different policy and regulatory issues within the United States, students will be exposed to international contexts as well particularly in developing countries.

Prerequisites: PH 1700 and PHM 3744. PHD 3930 and PHD 3731 are recommended.

Cross-listed with SBMI HI6324

PHM 3800 *Working with Diverse Communities*

3 credits

This course provides students an introduction to the knowledge and tools necessary to increase cultural sensitivity and humility by encouraging self-reflection and awareness. Each week will focus on the unique needs and challenges of a different community with invited speakers who can address the unique needs of those communities. The primary focus of the course will be on individuals who currently reside in the United States.

PHM 3810 *Health Policy in the United States*

3 credits

This course provides an overview of health policy in the United States. The principal institutions, processes, and ideas shaping health policy at the federal level will be described and explained. Health policy questions will be illustrated using substantive topics of importance to public health.

PHD 3810 *Health Policy in the United States*

3 credits

This course teaches students to appraise health policy in the United States and evaluate its strengths and weaknesses. Principal policy-making institutions, processes, and ideas that shape health policy at the federal level will be assessed and criticized.

PHD 3812 *Comparative Healthcare Systems: Policy Challenges and Economic Perspectives*

3 credits

This doctoral seminar course examines economic, political, and other pertinent aspects of various national health care systems across the world. Systems theory and performance evaluation theory are used as bases for comparison of the national systems and the sectors within those systems. In the past, the course has covered most European nations, and nations from Asia, Africa, South America, and the United States. Students are encouraged to explore more developed and less developed countries for comparison of critical factors that influence system construct.

PH 3815 *Health Policy Analysis*

3 credits

This course examines the process of policy development and the role of research and analysis in the process. A framework is introduced for selecting the type of research and analysis needed to address different policy questions. Key concepts and methods of policy research and analysis are introduced and applied to real-world policy problems in public health. Upon completion of the course, students should have an understanding of the role of policy analysis in the policy development process, be able to frame policy issues for research and analysis, and be able to identify and appropriately apply research methods and analysis to policy questions.

PH 3818 *Texas Health Policy: Emerging Issues and New Approaches*

3 credits

This course examines major issues, new programs, and legislative initiatives in Texas health policy. Background information on the state legislative process, budget, and historical role in health policy is presented. Policy analysis concepts and methods are introduced as a guide for class discussion and student assignments. When the legislature is in session, topics are selected that reflect proposed legislation. In semesters between legislative sessions, topics are selected based on interim study assignments and other sources. Topics typically include: Medicaid/CHIP changes/reform, healthcare regulation, behavioral health, long-term care, medical education, rural and border health, disease prevention and control, and health promotion.

PH 3825 *Public Health Law*

3 credits

This course introduces students to public health law, which defines the extent to which the state can interfere with private interests when protecting the health of the population. Students will study, through constitutional and statutory analysis, how the balance between these interests is determined. Because administrative agencies are used extensively to regulate matters that affect the public health, students will examine the legal characteristics of these governmental entities. The use of the common law to establish public health policy and remedies for public health problems will be considered.

PHD 3830 *Ethics and Policy*

3 credits

This course focuses on the application of ethics, values, and moral reasoning to problems and issues in public health. It offers a careful overview of approaches to moral theory and modes of assessment to develop students' skills in reasoning and evaluation. Special attention will be given to justice and equity as key moral claims in public health. Practical examples will be used to illustrate moral arguments, criteria, and modes of reasoning connected with health promotion, disease prevention, and healthcare delivery.

PH 3845 *Quality, Cost, and Value Evaluation in Healthcare*

3 credits

This course provides students with requisite knowledge and skills for understanding, assessing and evaluating quality, performance improvement, and patient safety within a healthcare organization. Using the Institute for Healthcare Improvement (IHI) Open School Curriculum, students will complete online courses in improvement capability, patient safety, triple aim for populations, person- and family-centered care, leadership, and quality, cost, and value.

PHD 3846 *Quality Management and Improvement in Healthcare*

3 credits

This course provides students with requisite knowledge and skills for evaluating and conducting research in the areas of quality, performance improvement, high reliability, and patient safety at the unit, organization and population levels. Frameworks for defining, analyzing and comparing quality outcomes are presented, inclusive of confounding factors. Operational approaches to population health and organization quality improvement are examined through expert speakers and real-world cases. Students are also introduced to management science techniques commonly used to assess and improve systems and workflows.

PH 3855 *Climate Change Policy*

3 credits

This course introduces students to the issues and controversies surrounding public policy to mitigate global climate change. The course will follow the progress of bills in the U.S. Congress intended to reduce greenhouse gas emissions, and will consider EPA's regulatory initiatives and policies adopted in the United States. The course will assess the full range of political positions, the role of science, and the impact of propaganda and advocacy on the climate change debate. The format will include lectures, film, group discussion, and written assignments.

PHM 3910 *Health Economics*

3 credits

PHD 3910 *Health Economics*

3 credits

This course covers the theory of microeconomic analysis and its application to health and health services. It emphasizes the use of theory to understand problems of organization, delivery, and financing of health services; discrepancies in health levels among members of society; and the choices available to society regarding these issues.

Doctoral students will also be required to write a paper that identifies and discusses the major policy and research issues in one of the areas that is introduced in the course, critically reviews relevantly published research in this area, synthesizes their view of the state of this research and suggests what types of research might be most fruitful, e.g., as if pursued in a dissertation.

PH 3915 *Methods for the Economic Evaluation of Health Programs*

3 credits

This course covers the concepts and methods for the economic analysis of healthcare decision alternatives. Topics will include cost-benefit, cost-effectiveness and cost-utility analysis, and other methods of decision analysis. It emphasizes the application of these methods to the evaluation of alternative health programs.

PHM 3918 *Geographic Information Systems Science*

3 credits

PHD 3918 *Geographic Information Systems Science*

3 credits

This introductory level elective course in Geographic Information Systems Science (GIS) introduces the science and skills required for the geographic exploration of public health data. Topics will include cartography, sources of GIS data, working with Census and other secondary data sources, geoprocessing, geocoding and basic spatial analysis, among others. Students will acquire skills through a combination of lecture, labs and hands-on assignments using ArcGIS and other software packages.

PH 3920 *Health Services Delivery and Performance*

3 credits

This course explores the effectiveness, efficiency, and equity of the U.S. healthcare system. Students are introduced to definitions, concepts, and methods used in health services research and policy analysis, and given an opportunity to use them to evaluate important problems and efforts to reform the healthcare system. Each section of the course is taught by a different faculty member with expertise related to one area of health services research and/or policy analysis. Each year, there is a thematic focus for the course that is addressed from the various perspectives and is the subject of a policy analysis exercise at the end of the semester.

PHM 3922 *Economic and Social Determinants of Health*

3 credits

PHD 3922 *Economic and Social Determinants of Health*

3 credits

This course introduces the concept of population health and analyzes the reason for health disparities between countries as well as socioeconomic and racial/ethnic groups within countries. It takes an approach to health that identifies the social factors, such as inequalities in income and opportunities, and racial/ethnic disparities that influence the health of populations. The course examines population health by exploring economic, social, and cultural factors; identifying systematic variation in these factors leading to health disparities; exploring how economic, social, and cultural conditions affect individual risk factors, human behavior, and biology; and assessing economic and social policies. A social determinants of health-related term paper is required.

For doctoral students: A longer and more in depth paper is required.

PHD 3926 *Health Survey Research Design*

3 credits

This course presents the methods for designing and conducting health surveys. Emphasis will be placed on problem conceptualization, measurements, and questionnaire design in the context of a total survey design framework. Examples of face-to-face, telephone, mail, and Internet surveys will be presented.

Prerequisites: PHM 1690 and PHM 2610 or equivalents

PHD 3930 *Econometrics in Public Health*

3 credits

This course has two learning objectives: developing skills in quantitative methods for the analysis of complex models, and understanding and critically evaluating public health research using econometric methods. This course consists of 11 units, including multicollinearity; autocorrelation and heteroscedasticity; specification tests; random and fixed effect models; endogeneity and instrumental variables; simultaneous equation models; and selection models.

Prerequisites: PH 1700 or equivalent (some knowledge of regression)

PHD 3931 *Advanced Econometrics*

3 credits

This course introduces advanced techniques in statistics and econometrics for conducting successful health outcomes and policy research. Students are expected to have an understanding of basic statistical concepts, such as discrete and continuous random variables, probability distributions, joint distributions, conditional distributions, independence, statistical inferences and estimations, properties of estimators, hypothesis testing, ordinary least square regression, logistic regression, one-way ANOVA, contingency tables, and χ^2 (chi-square) analyses. Topics covered will include Causal Inference, Causal Graphs, Treatment Effect Identification, Models of Causal Exposure, Linear regression, Panel Data methods including Fixed and Random Effects estimation, Limited Dependent Variable Models like - Logistic regression, Probit, Tobit, Heckman, 2-Part and 2-Step models, Interpreting Marginal Effects and Interactions for Limited Dependent Variable models, Modeling cost data especially using log transforms, Simultaneous Equations and Instrumental Variable Analysis, and Use of Specification Tests like Hausman, Breusch-Pagan, White, Park, Glejser and Box-Cox. The course will emphasize practical applications of statistical methods to real world problems of public health and health outcomes research.

Prerequisite: PHD 3930 or equivalent

PHD 3935 *Advanced Health Economics*

3 credits

This doctoral seminar-style course focuses on the application of microeconomic analysis to questions dealing with the production of health, the demand for health services, the production and supply of health services, market equilibrium, social health insurance, and government regulation of health sector activities.

Prerequisites: PH 3910 (or its equivalent) and consent of instructor

PH 3940 *Healthcare Outcomes and Quality Research*

3 credits

This course introduces students to measurement and evaluation issues associated with patient-centered outcomes and quality of care studies, an increasingly important component of present-day health services research. The focus will be on the application, rather than development, of measurements. Topics that will be covered include development of the outcomes framework, outcomes measures, risk adjustment of health outcomes, technical and practical issues with measurement and estimation, and empirical examples of healthcare outcomes research. Outcome and quality measures that will be covered include generic and condition-specific health status measures, satisfaction, patient trust, and patient adherence.

PH 3941 *Claims Data in Healthcare Research*

3 credits

This course provides an overview of the elements of administrative claims data. This information will be crucial to any student interested in utilizing claims data for research purposes. The course will focus on the various data fields in enrollment, and medical claims, and pharmacy claims. Strategies for effectively querying claims datasets will be provided. Multiple data sets include commercial claims, Medicare claims, and Medicaid claims.

Prerequisites: Familiarity with SAS or Stata

PHD 3945 *Advanced Health Services Research Methods*

3 credits

This course introduces students to the application of quantitative methods in health services research. The major elements of designing and conducting an empirical study will be covered, with emphasis on specification of research questions and design, measures, use of primary and secondary data sources, and

issues in bivariate and multivariate analysis. Examples of the use of different methods in the literature will be reviewed.

PHD 3946 *Strategy, Governance, and Leadership*

3 credits

This course provides students with an overview of the basic concepts and principles of strategic planning within the broader context of governance, management, and leadership. The emphasis on this broader context is important because it is in the arena of strategy development that governance and management overlap and the need for clear leadership arises. While the institutional focus is primarily on healthcare organizations, the organizational dynamics and strategic management principles apply across industries.

PHM 3949 *Strategic Leadership in Public Health*

3 credits

This course is designed for masters-level students in all public health disciplines. It focuses on applying and evaluating leadership theories, concepts, and emerging perspectives; analyzing personal, professional, organizational, and system leadership dynamics in a rapidly changing and complex world; and discerning the implications of leadership research on the practice of leadership in public health research and practice settings. The course content will examine the depth and nature of leadership as it is observed, experienced, practiced and developed. The course is designed to create a learning community among the students and faculty. In addition to the classroom session, there will be a weekly on-line discussion (via the Canvas discussion board medium) that will address specific case studies on the topics discussed in the classroom session. Students' participation will be assessed in both classroom and "virtual classroom" environments.

PHD 3950 *Advanced Leadership Studies in Public Health*

3 credits

This course is designed for doctoral students in all disciplines who have had previous leadership courses or leadership training. It focuses on synthesizing, applying, and evaluating leadership theories, concepts, and emerging perspectives; analyzing personal, professional, organizational, and system leadership dynamics in a rapidly changing and complex world; and discerning the implications of leadership research on the practice of leadership in public health research and practice settings. Three themes of reflection, critical thinking, and communication support the examination of leadership dilemmas, patterns, behaviors, and outcomes. Other topics to be addressed include leadership studies research; complex adaptive systems and sustainability; culture and change; ethics; power influence and politics; creating and sharing a vision; and futures studies.

PHD 3957 *Topics in Health Economics*

3 credits

This course explores topics in health economics. The course will focus on economic determinants of health, such as health insurance status, education, and income. It will also focus on policies that might affect health and health behaviors, such as taxes, and on classic and emerging issues in the field, such as social networks and health.

PHD 3970 *Doctoral Dissertation Proposal Development in Management, Policy and Community Health*

This course focuses on the development and critique of a dissertation research proposal for students pursuing a DrPH or PhD in MPACH.

Prerequisites: Enrolled in a doctoral program (DrPH or PhD) in MPACH; completed an acceptable dissertation topic synopsis and identified dissertation chair

PH 3998 *Special Topics in Management, Policy and Community Health*

Credit hours vary among Special Topics courses

Topics vary each semester and provide in-depth study of various public health issues.

PH 3999 *Independent Study in Management, Policy and Community Health*

1-9 credits

A plan of study is determined for each participating student and supervised by a member of the MPACH faculty. This course may be repeated for credit. All independent study courses are required to have learning objectives and an outline of learning activities.

INTERDEPARTMENTAL COURSES

PHM 5015 *Introduction to Qualitative Research in Public Health*

2 credits

This course will provide an overview of qualitative research in public health. Students will be introduced to qualitative research methods, different areas of research, and types of research questions. Underlying approaches will be examined and then different methods will be looked at with more detail. This introductory course will help students understand the core ideas, processes, and activities underpinning qualitative research. Students will be able to identify aspects of rigor and quality in studies carried out by other researchers. This knowledge will allow the student to use qualitative research regarding public health practice and provides preparation for further study of qualitative methods.

PH 5020 *Innovative Thinking*

2 credits

This course is designed for both master's and doctoral students who need to expand their thinking ability in terms of research questions and research solutions. The theory behind this class is that creativity and innovation can be taught. Topics include: cognitive biases and normal frames of reasoning; observation to inform thinking; thinking backwards; brainstorming; imagining the impossible as possible, and many other tools to your out-of-the box thinking toolkit. Senior scientists recognized for their creativity will share their wisdom.

PH 5025 *An Overview of Tobacco Control and Tobacco Regulatory Science*

3 credits

This course focuses on tobacco control and regulation over the past century including efforts by the tobacco companies as well as tobacco control scientists/practitioners. The course includes the history of these efforts, a focus on FDA's new regulatory authority, and major issues in the field, such as the regulation of e-cigarettes. Cigarette smoking is the largest cause of morbidity and mortality in the United States; the lessons learned are applicable across many public health areas.

PH 5030 *Diabetes Seminar*

2 credits

This seminar will offer comprehensive course content during a 1-week timeframe in the first summer session. Topic areas include standards and practice recommendations; pregnancy and diabetes; acute and chronic complications of diabetes; diabetes education; and medications. Treatment algorithms, protocols, and guidelines for weight loss, exercise, nutrition, glycemic control, insulin administration, and care of the elderly will also be discussed. Two diabetes cooking classes will be presented during the week.

The Diabetes Seminar and cooking classes are open to all UT Health students and Health Care Professionals. MPH/DI students should register under the course number PH 9997-870.

This course is also open to medical students, nursing students, etc. and to RDs/interns in the community for CEU credits.

PH 5098 *Special Topics in Interdepartmental Courses*

Credit hours vary among Special Topics courses

Selected Special Topics provide intensive coverage of interdepartmental theory and applications. Topics vary each semester.

PH 5098 *Special Topics in Interdepartmental Courses: Culinary Medicine (section 850)*

2 credits

Through innovative nutrition curriculum and hands-on training in the culinary arts, the Culinary Medicine course will teach medical, nursing, and dietetic intern students about food: how to cook, what to eat, and how to help their patients improve their diet – and thereby, their health. Course Fee: \$75.00

PH 5098 *Foundations of Scientific Writing in Public Health*

3 credits

This course provides students with the basic writing skills critical for scientific writing. Writing is a learned skill that develops with practice coupled with feedback and more practice. Good writing takes more than simply translating ideas onto the page. Good writing includes knowledge of grammar, crafting arguments, and careful revision and editing. This course provides a platform for students to revisit the rules of grammar, practice crafting and structuring arguments, translate ideas onto paper, and write a scientific proposal or manuscript. Students will have the opportunity to read good writing as well as enhance their writing skill through weekly writing assignments and receiving regular feedback.

PH 5098 *Special Topics in Interdepartmental Courses: Garden for Health (section 800)*

2 credits

In the Holistic Garden of the School of Public Health, students will gain knowledge of how to use the garden as a tool to improve health and quality of life. Common fruits, vegetables and herbs that are produced during the warmer and cooler months of the year along with information that pertains to their successful cultivation and their unique roles in our diet and health will be discussed. Course Fee: \$75.00

PH 5098 *The History and Culture of Disease and Healing*

3 credits

This course is presented in collaboration with the schools of The University of Texas Health Science Center at Houston (UTHealth), Rice University and the University of Houston. It is a humanities course with a series of lectures on Tuesday evenings that have been chosen for their relevance to the relationships between human history and culture and the epidemiology and impact of disease and the arts of healing. Each lecture is followed by a discussion session on Thursdays at 4-5:30 p.m. The unique collaborative format of this seminar demonstrates shared values between institutions of higher learning and the professional/academic training offered to various specialties.

PH 5099 *Independent Study in Interdepartmental Concentrations*

1-9 credits

A plan of study is determined for each participating student, and supervised by a member of the Concentrations faculty. In general, courses of independent study are not recommended unless a student has completed the appropriate introductory courses in the concentration or presents evidence of experience in the field. This course may be repeated for credit. All independent study courses are required to have learning objectives and an outline of learning activities.

PH 5102 *Health Disparities Core Seminar*

1 credit

Faculty in the Health Disparities Concentration will hold a 1-hour core seminar in both the fall and spring semesters. This seminar will be open to all students at UTHealth School of Public Health. However, students who are enrolled in the Health Disparities Concentration will be required to enroll in this course for one semester.

PH 5200 *Foundations of Leadership in Public Health*

3 credits

This is an introductory course in public health leadership for students in all academic programs. This course introduces students to the theories and principles of effective leadership, presents leadership challenges,

and discovers personal attributes of leadership in public health practice and research. Students will begin to develop life-long learning skills through self-development, experiential learning, and discussion of leadership approaches. Content areas will include complexity theory, change management, ethics, collaboration, effective communication, team-building, dialogue, decision-making, conflict management, leadership evaluation, advocacy, and strategic planning.

PHM 5210 *Selected Readings in Leadership Studies*

1 credit

PHD 5210 *Selected Readings in Leadership Studies*

2 credits

These seminars are designed to assess how public health professionals become leaders. Students are introduced to the concepts of leadership in public health, evaluation and analysis of leadership readings, and discussion and examination of leadership issues, using experience and examples from the field.

PH 5220 *Gender and Leadership*

3 credits

This course focuses on the topic of women and leadership. Using a seminar approach anchored in selected readings, students will consider prevailing theories of leadership and discuss the variable of gender. Readings will focus on a variety of specific issues such as the “glass ceiling,” derailing behaviors, and conflict style differences in women and men.

PH 5298 *Special Topics in Leadership Studies*

Credit hours vary among Special Topics courses

The courses offered may vary from year to year. Courses should be approved by the student’s leadership studies advisor.

PH 5301 *Maternal and Child Health Core Training Seminar I*

3 credits

PH 5311 *Maternal and Child Health Core Training Seminar II*

3 credits

The Maternal and Child Health Core Training Seminar sessions will provide an opportunity for intensive instruction and discussion of topics specific to Maternal and Child Health as well as hands-on experiences in community-related projects. The scope of the MCH Core Training Seminar curriculum is centered on life span development, from perinatal/infant health to child/adolescent and women’s health. Students will receive instruction on utilizing data sources specific to maternal and child health, such as vital records and other routine data sources as well as hands-on experience in extracting data, analyzing data, and interpreting results.

PH 5302 *Maternal and Child Health Fellowship Training Seminar I*

2 credits

PH 5312 *Maternal and Child Health Fellowship Training Seminar II*

2 credits

These afternoon sessions are designed for Maternal and Child Health Fellows to develop mastery of content covered in the morning sessions of the Maternal and Child Health Core Training Seminar by exploring maternal and child health practice from a team perspective. In addition to leadership training, which explores each of the maternal and child health leadership competencies experientially, these afternoon sessions of the MCH Core Training Seminar will allow the trainee cohorts to experience a shift from a “big group process” in the morning to a “team process” in the afternoon. They must be taken in sequence.

PH 5400 *Physical Activity Assessment and Surveillance*

3 credits

This course provides students with an in-depth understanding of the various methods used to measure physical activity and related constructs (e.g., energy expenditure and physical fitness) in individuals and populations. This understanding will be achieved through a review of the current research literature related to measurement methods and hands-on practice experiences with various physical activity measurement methods (i.e., data collection to interpretation). Behavioral, environmental, and policy-related correlates and determinants of physical activity will also be discussed.

PH 5401 *Physical Activity and Public Health Practice*

3 credits

This course provides a forum that promotes an understanding of effective practice strategies for implementation of public health programming related to physical activity. This understanding will be approached through review of the current research literature with a focus on the “Guide to Community Preventive Services” recommendations for physical activity. Topics in the course will focus on evidence-based strategies, as well as effective approaches to program development, implementation, and evaluation.

PHM 5402 *Social and Behavioral Aspects of Physical Activity*

3 credits

This course presents the contributions of increasing physical activity and reducing sedentary behavior to overall population health including morbidity, quality of life, mortality, and health care expenditures. The course focuses on social and behavioral constructs and theories and settings. The course topics include health benefits of physical activity; physical activity recommendations; informational approaches to promoting physical activity; behavioral and social approaches to promoting physical activity; environmental approaches to promoting physical activity; planning, implementing, and evaluating interventions; and program planning and evaluation.

PHD 5402 *Social and Behavioral Aspects of Physical Activity*

3 credits

This doctoral-level course focuses on theory-based approaches to promote physical activity and reduce sedentary behavior from a behavioral sciences perspective; particularly promoting physical activity among racial/ethnic minorities, youth, older adults, and populations with chronic conditions and disabilities. The course examines the importance of individual attributes, interpersonal factors, cultural factors, environmental conditions, and policies in understanding and developing effective interventions to promote physical activity and reduce sedentary behavior. The course presents social and behavioral constructs and theories and settings.

PH 5610 *Global Health Overview*

3 credits

This course presents an overview of the issues affecting the living conditions and the health status of low-income country residents, and the local and global responses to these problems. Throughout the semester, students will develop an understanding of global and international health through the discussion of sub-themes, including the different meanings of globalization; population and demographics; assessment, health indicators, and epidemiology; immunizations; communicable and emerging diseases; war, conflict, refugees, migration, and displacement; health systems; cultural differentiation; maternal and child health; food security and nutrition; trade agreements, agriculture, and pharmaceuticals; environmental health and pollution; urban health and the development of mega-cities; and economic development.

PH 5612 *Global Health Seminar*

1 credit

This weekly seminar is presented by faculty, students, and Visiting Professors, and varies in subject matter, depending on current events as well as the special expertise and experience of presenters.

PH 5613 *Critical Cinema for Public Health*

2 credits

This course presents a series of documentaries and Big Screen movies revolving around public health topics. The range of topics will include health disparities; health systems; culture, behavior, and health; environmental health themes; globalization; addictions; mental health; food production; research ethics and methods; violence; and surveillance and control of epidemics. All movie presentations will be followed by a class discussion.

PH 5698 *Special Topics in Global Health*

Credit hours vary among Special Topics courses

The courses offered may vary from year to year. Courses should be approved by the student's global health advisor.

PH 9996 *Capstone Course for MPH Students*

3 credits

The culminating experience capstone course for MPH students is a class that requires synthesis, integration, and problem-solving. These activities, in turn, require that the student be able to build on comprehension, application, and synthesis of principles and theory from the five public health disciplines and from the cross-cutting competencies.

Prerequisites: All core courses and a minimum of 30 completed credit hours. Collaborative Institutional Training Initiative (CITI) research ethics certification needs to be completed before registering for the Capstone Course.

PH 9997 *Practicum*

1-9 credits

A practicum is a unique learning experience that is planned, supervised, evaluated and graded. Practicum experiences allow students the opportunity to apply classroom education towards a real-world public health problem in a work setting. Students should consult their degree requirements for maximum credits that can be applied to their degree. More information about practicum can be found online on the UTHealth School of Public Health website.

PHM 9998 *Culminating Experience/ Thesis Research*

1-9 credits

A culminating experience is designed to ensure that all MPH graduates can integrate and apply the knowledge and skills that they have gained during their graduate training. Students should consult their degree requirements for maximum credits that can be applied to their degree. More information about culminating experience can be found online on the UTHealth School of Public Health website.

PHD 9999 *Dissertation Research*

1-9 credits

Dissertation research is for students pursuing a doctoral degree that are required to complete a written research dissertation that makes a substantial contribution to knowledge in the public health sciences. Students should consult their degree requirements for maximum credits that can be applied to their degree. More information about dissertation research can be found online on the UTHealth School of Public Health website.

RESEARCH CENTERS & FACULTY

Research Centers

UTHealth School of Public Health provides a direct service to communities through the research efforts of its campuses, departments, and research centers. It is the school's objective to translate its discoveries into policies and programs that have a beneficial impact on the health of the public across Texas, the nation, and the world.

The school's research centers have been developed by faculty to enhance areas of interdisciplinary research. The centers play an important role in supporting the diverse areas of public health and give students excellent opportunities to interact in real-world work environments. For a complete list of Research Centers visit the [UTHealth School of Public Health Research Centers](#) website.

Faculty at UTHealth School of Public Health

A complete listing of the faculty of UTHealth School of Public Health can be found online in the [Faculty and Staff Directory](#).

ACADEMIC AFFAIRS AND STUDENT SERVICES

The mission of the Office of Academic Affairs and Student Services is to assist students by providing timely and accurate information with high-quality service in an atmosphere that is both welcoming and professional. The office serves as the central “hub” for the services that will assist students from the time they apply through the time they graduate and beyond. The services and support systems offered through the office include: communicating with prospective students; processing of applicant documents; conducting orientation; providing financial assistance information; providing academic advising and related services; providing administrative support for courses, programs, and registration at UTHealth School of Public Health; assisting with career information and counseling; planning commencement activities; and facilitating activities with alumni and in conjunction with the UTHealth School of Public Health Alumni Association. In addition, the office, in conjunction with the UTHealth School of Public Health Student Association, promotes student life activities and acts as a liaison between students and faculty, advocating for student needs and concerns.

The office, located on the second floor, in the RAS building, is open Monday through Friday from 8:00 a.m. to 5:00 p.m.

Financial Assistance

UTHealth School of Public Health administers funds to support traineeships and scholarships. Information about the various scholarships awarded on the basis of academic merit and achievement is available from the UTHealth Office of Student Financial Services. Traineeships and scholarships are awarded according to merit, need, and field of specialization. Students can find information about these and other funds that become available by going to the [UTHealth School of Public Health Financial Assistance](#) website.

Students subject to selective service registration will be required to file a statement that the student has registered or is exempt from selective service registration in order to be eligible to apply for federal financial aid. In addition, effective January 1, 1998, the selective service requirement is also applicable to students applying for financial assistance funded by State revenue.

Traineeships

Traineeships are available for the term of the award and vary among types of training grants. For a complete list of current traineeships please visit the UTHealth School of Public Health Financial Assistance website.

Scholarships

UTHealth School of Public Health offers a number of endowed scholarships. Graduate scholarships are awarded on the basis of scholastic excellence and adequate preparation for graduate study in the student’s chosen field, as shown by the student’s academic record. Scholarship eligibility criteria include admission into a degree program; enrollment in coursework leading to the degree; reasonable progress in the degree program; good academic standing; GPA; and in some cases test scores; references; and personal statements. There are additional specific qualifications for scholarships in various areas of study. Students are encouraged to contact the Office of Academic Affairs and Student Services to obtain information about eligibility criteria and scholarships awarded in the student’s area of study. Scholarships may be available based on funding; availability may change, amount may change, and only competitive scholarships of \$1,000 or more will be eligible for resident tuition.

Selection Process

Awards of traineeships and scholarships are made by the UTHealth School of Public Health Scholarship and Traineeship Committee, which is composed of faculty members and administrative staff. In awarding scholarships, the committee considers the following as appropriate to achieve the donor's scholarship intent: faculty recommendations, academic performance, financial need, research interests, and other professional and personal achievements.

Fellowships

A limited number of fellowships are available through the research centers of UTHealth School of Public Health. Application for these fellowships is made directly to the centers. Selection criteria include those listed above, and the recipients are chosen by the faculty in the centers.

Career and Alumni Services

The Office of Career and Alumni Services at UTHealth School of Public Health provides information, service, training and support to students and alumni that can help them explore their values, interests, and skills; build their professional network; and stay engaged with the UTHealth School of Public Health.

The career and alumni services include resume and cover letter review, interview preparation, and exploring job strategies. The Office of [Career and Alumni Services](#) website has useful career and professional development information, including direct links to public health agencies, employment resources and opportunities. Career and Alumni Services also utilizes "Handshake", a web-based system that allows students to register online, upload and manage their resumes, and research job opportunities.

School Organizations

The [Student Association at UTHealth School of Public Health](#) has several purposes: to promote the mutually supportive two-way communication within and between the student body, faculty, staff, and administration at the school and institution; to improve the quality of student life through a variety of social activities; to foster opportunity for student involvement in special events; and to promote service to the community at-large.

All registered students in good standing at UTHealth School of Public Health are members of the Student Association. All student members are eligible to vote in general and committee elections and to hold office.

The Student Association Executive Board directs the general policy of the Student Association and is the governing body of the Student Association with the power to act on all matters in the best interests of the student body. The Executive Board is composed of 19 members: the elected officers, council representatives, and a representative from each of the campuses. The Student Association also appoints student representatives to various School of Public Health specific committees, such as Academic Council.

More information on UTHealth School of Public Health student groups can be found on our website. Information regarding the registration of student organizations at The University of Texas Health Science Center at Houston and the UTHealth Student Organization Manual can be found at: <https://inside.uth.edu/academics/organizations.htm>

GRADING, CONDUCT, AND SATISFACTORY PROGRESS POLICIES

Grades

Letter grades (“A,” “B,” “C,” or “F”) are given for all MPH core courses. Elective courses may be letter-graded or graded on the basis of pass/fail (“P” or “F”) at the discretion of the instructor. Letter grades in pass/fail courses (i.e., an “F”) will not be included in the GPA calculated for letter-graded courses. A GPA will be calculated from all letter-graded courses. In computing GPA per hour, the following scores are used: A = 4 points; B = 3 points; C = 2 points; F = 0 points. The GPA is calculated by multiplying the grade points by the number of credit hours for each course. Repeated courses will be listed on the transcript along with the original course. However, please note the following stipulations:

- The GPA will be calculated on the letter-graded courses only using the grade from the repeated course.
- Students have the opportunity to retake a course only one time for calculation of the GPA.
- A third attempt is rarely approved, and will only be considered if the first two attempts were failures. Students may petition to the Office of Academic Affairs and Student Services to retake a course a third time.
- The final attempt will be the grade calculated into the GPA.

An INCOMPLETE will revert to an “F” if the coursework is not successfully completed after one semester. However, at the course instructor’s discretion, a grade may be entered to replace the “F” when the work from the incomplete is completed. A “W” grade is assigned when a student withdraws from a course.

Deadline for Dropping Courses After the Add/Drop Period

To process final semester grades, degree audits, and complete graduation requirements and procedures, the drop date for courses will need to be requested before the end of the term. The deadlines for dropping courses per term are as follow:

- Fall/Spring Semesters: 3 weeks prior to the last class day
- Summer Sessions: 2 weeks prior to the last class day for the 12-week session and the 6-week session.

To drop a course, a student must request to drop a course via the Office of the Registrar at myUTH. The student is required to get signatures from the instructor(s) and their advisor before submitting the request (form) to the Office of Academic Affairs and Student Services, E-201. It is strongly recommended that students submit the withdrawal form as soon as they make the decision that a withdrawal is necessary.

Classes dropped on or before the 12th class day of a semester or 4th class day of a summer term will not appear on a student’s transcript. Classes dropped after the 12th class day of a semester or the 4th class day of a summer term will appear on the student’s transcript with a “W”.

Student Academic Grievance Process

Individual faculty members have primary responsibility for grading and evaluations. The faculty member’s judgment is final unless compelling evidence suggests differential treatment or mistake. In attempting to resolve any issue regarding academic matters, it is the student’s obligation to first make a serious effort to resolve the matter with the faculty member with whom the issue originated. If the student and faculty member cannot resolve the matter, the student may elect to use the formal Academic Grievance Resolution Process to request a review and recommendation from the Academic Grievance Committee, a subcommittee of the Academic Council.

The Student Academic Grievance Process and Flowchart is available on the Academic Affairs website under the “Policies” tab.

Satisfactory Progress

Satisfactory progress is evaluated on an individual basis by a student's advisor and advisory committee members. Evaluations for all students are required at least one time in each of the fall and spring semesters. Advisory committees review student coursework and progress toward academic goals. This overall evaluation of knowledge and performance allows the committee to determine which students have progressed satisfactorily and which should be placed on academic probation. Failure to attend the evaluation meeting may result in a "hold" placed on the student's registration for a subsequent term.

Academic probation provides a structure within which the faculty of the student's advisory committee can address issues and problems related to the student's academic performance. In order to identify and help those students (degree-seeking and non-degree/certificate students) who are having academic difficulty, defined by receiving a failing grade documented in the student record, or the student receiving a grade of "C" in two or more classes, or has had any combination of four or more classes with a Withdrawal ("W") or Incomplete ("I"), the Academic Remediation and Probation Steps Policy is established to address the issues early in a student's program before a status of probation becomes necessary.

Step 1

Academic Remediation

Academic remediation status will be put into effect by the Office of Academic Affairs and Student Services when a failing grade has been documented, or the student has had two or more classes with a "C" grade, or has had any combination of four or more classes with a Withdrawal ("W"), or Incomplete ("I").

Remediation Plan

The Director for Academic Affairs will send a letter to the student and their advisor that requires the student to submit a plan for remediation. A hold will be placed on the student's record until a remediation plan is submitted to the Director of Academic Affairs.

The plan should be developed by the advisor and the student and sent to the Director for Academic Affairs for approval. The plan should indicate what remediation needs to be completed in order for the student to be taken off remediation, the timetable for completion, and the consequences if the student does not meet the requirements and deadlines in the plan. The advisor and the student should sign a written description of the plan and timetable thereby agreeing to the terms recommended therein. A copy will be provided to the student and the Office Academic Affairs and Student Services.

When the advisor agrees that the student has met the requirements of the remediation plan, the Director of Academic Affairs should be notified.

Step 2

Probation – Failure to Make Academic Progress

The second time the student meets the criteria for academic remediation, they will be placed on academic probation and a probation remediation plan will be created. If the student fails to meet the probation remediation plan or they meet the criteria for a second probation, the school will recommend dismissal. Appeals of dismissal can be submitted to the Academic Council Probation Subcommittee. The Dean is the final arbitrator of dismissal.

Students who are veterans receiving assistance from the VA (e.g., the GI Bill) and who fail to achieve satisfactory progress at the end of a probationary semester will be reported to the Department of Veterans Affairs as making unsatisfactory progress.

Students who have been dismissed from the school for unsatisfactory progress may be evaluated for readmission. Readmission to the degree program must follow general admission policies. Students seeking readmission should contact the Director for Academic Affairs for details regarding necessary application documents and procedures.

Absences, Long-term Absences, and Readmission

Students who anticipate interrupting their program for two or more semesters should consider requesting a leave of absence (LOA). Students who have an approved LOA maintain their student status within the school. The LOA “stops the clock” on the student’s degree program and does not add to the timeline for completing the degree.

The LOA is requested by submitting a memorandum to the Director for Academic Affairs explaining the reason(s) for the request, estimating the time away from the program, and containing both the student and advisor signatures. If the leave request is submitted by email, the advisor can send an e-mail in place of a signature. The LOA may be granted for up to one (1) calendar year. In extraordinary circumstances, a second year may be granted. LOAs do not extend beyond two (2) years.

After non-LOA absences for a duration of one (1) or more calendar years (three (3) or more consecutive semesters), the student is automatically dismissed from the school. To complete a degree, the student must be readmitted to the degree program. All applicants for readmission must meet the admission standards described in the school catalog at the time of readmission. Readmission requires a review of the applicant’s record while previously enrolled at the school. Following the review and decision by the department or campus to which the student wants to be admitted, the departmental/campus recommendation will be forwarded for subsequent evaluation and approval of the application by the school’s admissions committee.

Credit hours previously accumulated toward the degree program may be counted after readmission to the same degree program. However, the student’s advisory committee may require that the student repeat one or more courses if the student has not been enrolled in the school for more than five (5) years. New course requirements adopted by the school during the student’s absence may be required of the student if the Student Advisory Committee faculty members so advise, even if this requirement results in greater than minimum required credit hours of coursework toward the degree.

Prior thesis research must be reviewed and approved by the newly formed Student Advisory Committee and the Research Office at UTHealth School of Public Health. The topic and content are expected to be up-to-date and relevant. All research compliance policies in effect at the time of readmission apply to the readmitted student and their research project.

Students seeking readmission to the school should contact the Director for Academic Affairs for details regarding necessary application documents and procedures.

Required Review

Any student in a doctoral degree program who has successfully completed the preliminary examination is expected to complete the degree within four (4) years from the date of admission to candidacy (three (3) years from the previous preliminary examination for students matriculating before fall 2011). Otherwise, the dissertation committee will review the progress at the end of the 4-year period and will consider such recommendations as (1) the meeting of any new requirements that may have been adopted in the interim; (2) additional coursework; or (3) discontinuation of the candidacy. If the degree program is continued, the academic progress of the student will be reviewed by the dissertation committee on a regular basis.

Recommendations of the dissertation committee are forwarded to the Director for Academic Affairs for a formal 1-year extension of the doctoral program.

Student Conduct and Discipline

Students are charged with knowledge of and compliance with all UTHealth regulations concerning student conduct and discipline as set forth in the UTHealth [Handbook of Operating Procedures \(HOOP\)](https://www.uth.edu/hoop/index.htm) found online at: <https://www.uth.edu/hoop/index.htm>

UTHealth has adopted policies regarding misconduct in school-related scholastic and/or research activities, whether on- or off-campus. Responsibility and authority for investigating allegations of misconduct and enacting disciplinary measures lies with the Director of Academic Affairs, subject to appropriate review by the Dean, whose decision is final. Students are expected to sign a pledge adhering to the school's honor code during New Student Orientation.

Plagiarism

Dishonesty in any scholastic activity is a serious breach of ethical standards and is grounds for disciplinary action, up to and including dismissal from the school. Plagiarism is the use of ideas or words of another person without giving appropriate credit. The appropriation of another author's text and the presentation of it as one's own constitutes plagiarism. Plagiarism, in turn, constitutes academic misconduct under UTHealth policy. Written materials regarding plagiarism are provided to all students during orientation. These materials explain what plagiarism is and give helpful examples so that students know how to properly cite sources. These materials are available in the Office of Academic Affairs and Student Services for all students and faculty. International students should pay particular attention to this material since laws, regulations, and practices may differ in various cultures.

UTHealth School of Public Health provides a program called Turnitin via Canvas that students are required to utilize to ensure that their written documents do not contain text that may have been inadvertently copied from a published author's work.

TEST SECURITY

Protecting Your Degree

The U.S. Department of Education and The Commission on Colleges of the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) require that an institution that offers distance or correspondence education demonstrates that the student who registers in a distance or correspondence education course or program is the same student who participates in and completes the course or program and receives the credit by verifying the identity of a student who participates in class or coursework by using, at the option of the institution, methods such as:

- a. a secure login and passcode,
- b. proctored examinations, or
- c. new or other technologies and practices that are effective in verifying student identification.

The UTHealth School of Public Health Procedures for implementation of the Test Security Plan are as follows:

1. Faculty must ensure that all assignments that accrue to a student's grade meet the guidelines set forth in the course syllabus for independence of work.
2. New syllabus templates will require detailed guidance for what is meant by independent work (i.e., when students may collaborate on graded assignments and what materials can be used).
3. Traditional (non-online) courses; qualifying examinations; and preliminary examinations (multiple choice, calculations, short answer, or short essay) will be offered as in-class, proctored examinations. As an alternative, faculty are encouraged to develop and carefully grade papers and other assignments that are developed at the analysis, synthesis, and application levels of pedagogy so that cheating becomes impossible and/or easily identifiable.
4. Faculty may require students to run all papers and narrative graded assignments by the student through Turnitin (or other reliable plagiarism check) via Canvas and that the student submit the Turnitin report along with the written assignment. For assignments requiring calculations, analysis, and interpretation, graders will check for unexpected patterns of right and wrong answers.
5. Online courses with examinations will offer only proctored examinations (multiple choice, calculations, short answer, or short essay) by requiring that students take examinations via a live, online proctoring service for students that take courses with examinations that are online. The only exception to this policy is the case of a student who has an ADA accommodation plan on file with UTHealth that requires face-to-face examination administration.

FACILITIES AND RESOURCES

Buildings

The ten-story Reuel A. Stallones School of Public Health Building is the primary site of the school's teaching, research, and community service activities. Four of the school's five academic disciplines are located in the building, and the fifth is based in the nearby University Center Tower. All of the campuses are connected through interactive television and other means of communication. Teaching facilities, including auditorium, classroom, and seminar spaces equipped for distance learning, are distributed throughout the building, as are faculty offices and research project spaces. Teaching and research laboratories occupy five levels in the west wing of the building. A comprehensive library, computer study spaces, student services, and administrative offices are also included.

All institutional facilities and locations are intended for the exclusive use of active students, faculty, staff, and registered alumni for purposes consistent with educational programs and recognized activities. Solicitation in UTHealth facilities or on UTHealth property is not permitted except as provided by the UTHealth [Handbook of Operating Procedures](#).

Library Facilities and Services

The mission of the UTHealth School of Public Health Library & Graduate Communication Center is to provide primary information support services for the education, research, and community health services programs of the faculty, students, and staff. The focused support of the Library for the specialized academic and research programs of the school is evidenced in the selection of key public health information books, journals, and online databases. Remote access that utilizes a proxy server and the UTHealth Virtual Private Network (VPN) makes available to faculty, students, and staff over 31,000 electronic periodicals, over 50,000 electronic books, and more than 150 subscribed online databases.

The UTHealth School of Public Health Library & Graduate Communication Center is a member of the Texas Health Science Libraries Consortium (THSLC), which is the collaboration of health science libraries in the Houston-Galveston area. The THSLC leads and encourages collaboration through shared digital library environments and resources to provide access to the world of information for its educational, clinical, and research communities. The five library members of THSLC are:

UTHealth School of Public Health Library & Graduate Communication Center
Texas Medical Center Library (TMC)
MD Anderson Cancer Center Research Medical Library (MDA)
UTHealth School of Dentistry Library (UTSD)
UTMB Moody Medical Library (TMB)

The holdings of the five THSLC libraries have been combined into a single online catalog that contains more than 400,000 book and journal titles. Borrowing privileges to any of the libraries above are extended to all members of the THSLC. THSLC purchases of online databases and journals have greatly increased access to specialized resources for the community at UTHealth School of Public Health.

In addition to the wealth of resources provided by the THSLC, the UTHealth School of Public Health Library & Graduate Communication Center is able to take advantage of group purchases made by both the TexShare consortium and The University of Texas System to expand the collection of both electronic journals and online databases. In particular, UT System agreements with major publishers have resulted in access to a far richer, more academically diverse collection of electronic journals and databases than was previously possible through individual library agreements.

To ensure that students are knowledgeable about the specialized resources available in their subject areas, multiple workshops are offered each semester covering primary research databases for each of the four departments. Individual instruction is provided on a walk-in basis, by appointment, or by clicking on the “Ask a Librarian” link which can be found on any library webpage, students and faculty may also take advantage of extended literature search assistance for grant applications, research papers, class projects, and theses and dissertations through face-to-face consultations with a Library Liaison from the Texas Medical Center Library.

Computer Services and Facilities

UTHealth School of Public Health Information Technology Services (SPH-IT) supports all aspects of IT operations; desktop services, server and data center operations, application development, and support for the school. UTHealth IT services provides campus-wide services such as single sign-on, network security and firewall, Internet access, Email, and Network shares. SPH-IT offers several services which include, the school’s desktop services, VPN with 2-factor authentication, network based file storage space, and an application environment.

The UTHealth School of Public Health IT applications include several applications for student classroom, research, and administrative areas. They offer standard database environments like Oracle, MS-SQL, MySQL, in a Windows and Linux space which includes secure HIPAA regulated database environment along with custom software development, and consulting services on technology issues to all the school faculty and staff.

SPH provides industry standard WebEx based interactive-video classroom technologies in most classrooms. This technology creates a virtual class environment across all the SPH campuses.

SPH-IT also hosts a REDCap environment available free to all its faculty and students. All faculty and students have access to the UTHealth School of Public Health virtual computer lab, accessible from any Internet connected computer, capable of supporting hundreds of users at any one time and has access to many of the most commonly-used software packages available today.

Student Requirements

Students at UTHealth School of Public Health must have a personal computer available to them. For software not provided through the virtual computer lab, the school provides reduced software prices through the UTHealth Bookstores for certain required software titles, including Windows Operating System, MacOS, Microsoft Office, and certain statistical software products required to use during study. For compatibility purposes, students should be running the latest version of either the Windows Operating System or Macintosh Operating System. However, students should note that the most commonly used platform is the Windows Operating System.

All students are provided with a user account, which offers access to a Web-based electronic mail application, an online learning management system, the ability to connect personal wireless computers within campuses, and a file repository and sharing system.

For compatibility purposes, all students should have a computer with the following minimum requirements and recommendations:

Operating System	Windows 8.1 or higher (preferred), Mac OS X 10.7 (Lion) or higher
Web Camera	Resolution at least 640 x 480, but 1280 x 720 preferred, must also include a microphone
Memory (RAM)	4 GB minimum, 8 GB or more is recommended
Browser	Internet Explorer 9+, Chrome, Firefox, Safari (Mac users)
Internet Speeds	Preferred: DSL and Cable connectivity from outside the campus. Dialup and ISDN services will not provide enough bandwidth for most applications to function properly.
Antivirus Software	You must have Antivirus software. Microsoft Security Essentials is recommended for Windows computers if no other software is installed and Sophos Antivirus for Mac users. Both products are free to students through the vendor websites.
Proctoring Software	The latest versions of Adobe Flash Player is required for the Web-based proctoring software, ProctorU. You can test your system's compatibility with our proctor solution at, http://www.proctoru.com/testitout/ .
Other Software	Access to most course software through a virtual computer lab environment is provided. This system is called 2X. You can gain access to the software and instructions for configuring the software on the "Students" section of the IT Services website, https://sph.uth.edu/faculty/it-services/ . 2X software clients are available for both Windows and Mac operating systems. Additionally, Microsoft Office is the primary application tool used by all faculty. Regardless of your operating system, you will be most compatible with your faculty if you have Microsoft Office installed.