

**The University of Texas
School of Public Health at Houston**

2016-2018 Catalog Addendum



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Administrative Officers

CURRENT: (page 6)

Campus dean is appointed; department chair is appointed; and name of department is revised

Bijal Balasubramanian, PhD, MPH, MBBS

Interim Campus Dean

Dallas Campus

Barry R. Davis, MD, PhD

Interim Chair

Department of Biostatistics

CHANGE TO:

Bijal Balasubramanian, PhD, MPH, MBBS

Campus Dean

Dallas Campus

Hulin Wu, PhD

Chair

Department of Biostatistics and Data Science

Writing Assessment

CURRENT: (page 13)

Delete the section on Writing Assessment

At first matriculation, all incoming degree-seeking and certificate students to UTHealth School of Public Health are required to take a writing assessment test during or immediately following orientation and prior to course registration. The result of the writing assessment will determine the level of guidance to be provided to students for improvement in their writing skills. This guidance may include the following: a notice that no writing remediation will be recommended, a recommendation to take specific writing courses offered by the school, a recommendation to take a more basic writing course(s) at a local university/community college, or a recommendation to take an extramural course designed for non-native English-speaking students. Students will be responsible for any costs incurred by having to take additional writing courses. All recommended remediation(s) must be completed within the specified time frame provided at the time of the writing assessment. Satisfactory completion of the requirements made for improving writing skills must be met in order to successfully proceed through respective degree plans. Failure to complete the required writing recommendations can result in the student being denied registration for courses in subsequent terms. Depending on the writing assessment scores, some students will be required to retake the writing assessment one year after matriculation.

CHANGE TO:

[Delete section]

Degree Programs

CURRENT: (page 15)

Clarification about online courses

Please note that it is not possible to earn a degree by taking courses only at night or online. Students may take no more than 50 percent of their degree program in online courses.

CHANGE TO:

Please note that it is not possible to earn a degree by taking courses only at night or online. Doctoral students may take no more than 50 percent of their degree program in online courses. Students in the MPH and MS degree programs are allowed to take more than 50 percent of their courses online, however, at the time this addendum was published, no degree is offered 100% online.

Master of Public Health

CURRENT: (page 17-18)

Adding an MPH program at the El Paso Campus; and changing the program name from Occupational and Environmental Health to Environmental Health for the MPH program

Campus MPH Programs

El Paso Campus
 Customized
 Health Promotion/Health Education

Houston Campus
 Customized
 Biostatistics
 Community Health Practice
 Epidemiology
 Health Promotion/Health Education
 Health Services Organization
 Healthcare Management
 Occupational and Environmental Health

San Antonio Campus
 Customized
 Epidemiology
 Health Promotion/Health Education

CHANGE TO:

Campus MPH Programs

El Paso Campus
 Customized
 Environmental Health
 Health Promotion/Health Education

Houston Campus
 Customized
 Biostatistics
 Community Health Practice
 Environmental Health
 Epidemiology
 Health Promotion/Health Education
 Health Services Organization
 Healthcare Management

San Antonio Campus

*Customized
Environmental Health
Epidemiology
Health Promotion/Health Education*

Doctor of Public Health

CURRENT: (page 22)

Changing the program name from Occupational and Environmental Health to Environmental Health for the DrPH program

Campus DrPH Programs

Houston Campus
*Community Health Practice
Epidemiology
Health Promotion/Health Education
Occupational and Environmental Health*

San Antonio Campus
*Community Health Practice
Occupational and Environmental Health*

CHANGE TO:

Campus DrPH Programs

Houston Campus
*Community Health Practice
Epidemiology
Health Promotion/Health Education
Environmental Health*

San Antonio Campus
*Community Health Practice
Environmental Health*

Doctor of Philosophy

CURRENT: (page 29)

Adding a PhD program at the El Paso Campus

[Insert text below]

CHANGE TO:

Campus PhD Programs

El Paso Campus
Environmental Sciences

Dual Degree Programs

CURRENT: (page 39)

Inserting a new dual degree program

[Insert text below]

CHANGE TO:

DDS/MPH Program (Houston Campus)

Dental students at the UTHealth School of Dentistry at Houston may apply for the integrated DDS/MPH Program. The MPH is widely recognized as valuable supplemental training for health professionals. The DDS/MPH dual degree program provides an integrated curriculum that includes a number of shared courses. Students spend the fall and spring semesters at the UTHealth School of Public Health after the first, second, or third year of dental school. Those graduating with the DDS/MPH are uniquely poised to tackle issues such as disparities in access to care, policy-making, disease prevention, oral health education, oral health research, and improving overall access to care. The usual application procedures and deadlines should be followed at UTHealth School of Public Health, in consultation with the UTHealth School of Dentistry at Houston. Interested students may apply early (as soon as possible after dental school acceptance) so that they can enroll in classes during the summer before they begin dental school. This facilitates completion of the requisite hours needed for graduation. Students may also be admitted during the first two years of dental school, but this may lengthen the program beyond five (5) years. Importantly, dual degree students cannot begin their year of full-time study at the UTHealth School of Public Health after graduating from UTHealth School of Dentistry at Houston. The selection of specific academic programs, as well as scheduling of specific courses and practica for individual students is guided by an advisory committee comprised of faculty from both institutions.

Contact

Sam Neher, MS

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Non-degree Programs

CURRENT: (page 42)

Inserting a new certificate program

[Insert text below]

CHANGE TO:

Certificate in Healthcare Management

The Certificate in Healthcare Management program 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 non-degree program consist of learning modules in healthcare management (15 semester credit hours) designed to meet the needs of students, employers, and community partners. A certificate is awarded to students who pass all courses. Students in the certificate program can also consider applying to one of the degree programs at the school.

Contacts

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Advanced MPH Programs for Undergraduates – BS/MPH (4+1 Programs)

CURRENT: (page 43)

Inserting two new Bachelor's/MPH (4+1) programs

[Insert text below]

CHANGE TO:

Houston Campus

UTHealth School of Dentistry at Houston and UTHealth School of Public Health
Bachelor of Science in Dental Hygiene/MPH program

Contact

Sam Neher, MS

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San Antonio Campus

St. Mary's University and UTHealth School of Public Health
Bachelor of Arts/Science/MPH program

Contact

Melissa Valerio, PhD, MPH

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Just in Time Courses

CURRENT: (page 45)

Inserting a new course

[Insert text below]

CHANGE TO:

PHM 1117 *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping) – Part II*

Fernandez, Markham, Springer, Valerio, 2 credits, b, c – semester following PH 1116 intensive 1-week format course

This course integrates and extends the knowledge of behavioral science theory into planning models for health promotion programs beyond that acquired in PH 1116. Working on a health problem of their choice, 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. Student evaluations include a guided written health promotion project plan.

Prerequisites: PH 1116

PHD 1117 *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping) – Part II*

Fernandez, Markham, Springer, Valerio, 2 credits, b, c – semester following PH 1116 intensive 1-week format course

This course integrates and extends the knowledge of behavioral science theory into planning models for health promotion programs beyond that acquired in PH 1116. Working on a health

problem of their choice, 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. Doctoral students will prepare a concept outline and abstract as part of preparation of class papers for publication. Student evaluations include a guided written health promotion project plan and participation in class and group assignments.

Prerequisites: PH 1116

Academic Term Structure

CURRENT: (page 56)

Adding a description for course prefixes used during course registration

Availability of courses is contingent upon sufficient registration.

CHANGE TO:

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. Since classrooms are assigned based on campus enrollment, 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> number that corresponds to their campus location. Classrooms are assigned based on campus enrollment.
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	These sections are for online courses (PHW, PHWM, and PHWD) and are available to students at all campuses.
1000 and up	Reserved for independent studies, practicum, thesis and dissertation courses

Biostatistics and Data Science

CURRENT: (page 64)

Inserting a new course

[Insert text below]

CHANGE TO:

PHD 1861 *Introduction to Meta-Analysis*

DeSantis, 1 credit, b (odd-numbered years), c (even-numbered years)

This is an intensive introductory course and the 3rd section of PHD 1431 “Tools and Methods for Systematic Reviews and Meta-Analysis.” 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. The 1 credit meta-analysis course offered by Biostatistics is designed to allow students to identify whether and how to conduct meta-analysis for a variety of data scenarios. 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.

CURRENT: (page 67)

Inserting two new courses

[Insert text below]

CHANGE TO:

PH 1975 *Introduction to Data Science*

Miao, Wang, 3 credits, a

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

PH 1976 *Fundamentals of Data Analytics and Predictions*

Yamal, 3 credits, b

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.

Epidemiology

CURRENT: (page 83)

Inserting a new course

[Insert text below]

CHANGE TO:

PH 2781 *Practical Python Programming and Algorithms for Data Analysis*
Jun, 3 credits, cd

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.

Environmental and Occupational Health Sciences

CURRENT: (page 96)

Inserting a new course

[Insert text below]

CHANGE TO:

PH 2132 *Infection Control and Biosafety*
Rodriguez, Emery, 3 credits, b

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.

Health Promotion and Behavioral Sciences

CURRENT: (page 104)

Change in list of methods courses to choose from for the minor in Behavioral Sciences

Methods Courses

- **PHM 1118** *Introduction to Qualitative Research Methods*
- **PHD 1121** *Advanced Methods in Program Evaluation*
- **PH 1324** *Applied Discrete Data Analysis using Stata*
- **PHD 1130** *Applied Measurement Theory*
- **PHD 1132** *Latent Variable Models and Factor Analysis*
- **PHD 1420** and **PHD 1421** *Research Design and Analysis in Behavioral Sciences I and II*
- **PHD 1425** *Applied Multivariate Statistics for the Behavioral Sciences*
- **PHD 1430** *Systematic Review, Meta-Analysis, and Evidence-Based Public Health*

CHANGE TO:

Methods Courses

- **PHM 1118** *Introduction to Qualitative Research Methods*
- **PH 1324** *Applied Discrete Data Analysis using Stata*
- **PHD 1130** *Applied Measurement Theory*
- **PHD 1132** *Latent Variable Models and Factor Analysis*
- **PHD 1420** and **PHD 1421** *Research Design and Analysis in Behavioral Sciences I and II*
- **PHD 1430** *Systematic Review, Meta-Analysis, and Evidence-Based Public Health*
- **PHD 1431** *Tools and Methods for Systematic Reviews and Meta-Analyses*

CURRENT: (page 110)

Inserting a new course

[Insert text below]

CHANGE TO:

PHM 1117 *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping) – Part II*

Fernandez, Markham, Springer, Valerio, 2 credits, b, c – semester following PH 1116 intensive 1-week format course

This course integrates and extends the knowledge of behavioral science theory into planning models for health promotion programs beyond that acquired in PH 1116. Working on a health problem of their choice, 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. Student evaluations include a guided written health promotion project plan.

Prerequisites: PH 1116

PHD 1117 *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping) -- Part II*

Fernandez, Markham, Springer, Valerio, 2 credits, b, c – semester following PH 1116 intensive 1-week format course

This course integrates and extends the knowledge of behavioral science theory into planning models for health promotion programs beyond that acquired in PH 1116. Working on a health problem of their choice, 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. Doctoral students will prepare a concept outline and abstract as part of preparation of class papers for publication. Student evaluations include a guided written health promotion project plan and participation in class and group assignments.

Prerequisites: PH 1116

CURRENT: (page 117)

Change in course number

PHD 1320 *Ethics in Public Health*

Spike, 2 credits, a, b

CHANGE TO:

PHD 5012 *Ethics in Public Health*
Spike, 2 credits, a, b

Management, Policy and Community Health

CURRENT: (page 126)

Change in course requirements for the DrPH in Community Health Practice

Before the preliminary examination:

- **PH 2615** *Epidemiology II*
- **PH 1700** *Intermediate Biostatistics*
- **PHD 1113** *Advanced Methods for Planning and Implementing Health Programs (Intervention Mapping)*
- **PH 3800** *Working with Diverse Communities*
- **PHD 3998** *CHP Core I*
- **PHD 3998** *CHP Core II: Proposal Development*

After the preliminary examination:

- **PHD 3830** *Ethics and Policy* or **PHD 1320** *Ethics in Public Health*
- **PHD 3998** *CHP Core III: Implementation and Analysis* (Completion of CHP CORE III can serve as practicum)
- **PH 9997** *Practicum* (or an elective course if CHP Core III served as practicum)
- **PH 9999** *Dissertation Research* (at least 1 credit hour)

CHANGE TO:

Before the preliminary examination:

- **PH 2615** *Epidemiology II*
- **PHD 1116** *Advanced Methods for Planning and Implementing Health Programs (Intervention Mapping)* – intensive 1-week format course
- **PHD 3998** *Working with Diverse Communities* (2 credits) or **PH 3800** *Working with Diverse Communities* (3 credits)
- **PH 3998** *Community-Based Grant Writing Workshop*
- **PHD 3998** *Community Engagement and Community-Based Participatory Research*
- **PHD 3998** *Evidence-Based Public Health Practice*
- **PHD 3998** *Practice-Based Methods and Design*
- **PHD 3998** *Principles and Practice of Public Health*

After the preliminary examination:

- **PHD 3830** *Ethics and Policy* or **PHD 5012** *Ethics in Public Health*
- **PHD 3998** *Thinking for Public Health*
- **PH 9997** *Practicum* (or an elective course if CHP Core III served as practicum)
- **PH 9999** *Dissertation Research* (at least 1 credit hour)

CURRENT: (page 129-130)

Change in courses for the PhD track in Healthcare Management/Health Policy

Before the preliminary examination:

- **PHD 3846** *Quality Management and Improvement in Healthcare*
- **PHD 3721** *Healthcare Finance*
- **PHD 3731** *Healthcare Management and Policy Research*

- **PHD 3930** *Econometrics in Public Health*
- **PHD 3810** *Health Policy in the United States*
- **PH 3815** *Health Policy Analysis*

After the preliminary examination students will select the Healthcare Management or Health Policy track:

Healthcare Management Track:

Select two courses (6 hours) from the following:

- **PH 3738** *Legal Issues in Healthcare* OR **PH 3747** *Healthcare Operations Management*
- **PHD 3998** *Operations, Technology & Decision Management*
- **PH 3736** *U.S. Healthcare Payment Systems and Policy*
- **PHD 3946** *Doctoral Strategy, Governance, and Leadership*

CHANGE TO:

Before the preliminary examination:

- **PHD 3846** *Quality Management and Improvement in Healthcare*
- **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*

After the preliminary examination students will select the Healthcare Management or Health Policy track:

Healthcare Management Track:

Select two courses (6 hours) from the following:

- **PH 3738** *Legal Issues in Healthcare* OR **PH 3747** *Healthcare Operations Management*
- **PHD 3998** *Operations, Technology & Decision Management*
- **PH 3736** *U.S. Healthcare Payment Systems and Policy*
- **PHD 3750** *Policy Issues in Health Information Technology*
- **PHD 3946** *Doctoral Strategy, Governance, and Leadership*

CURRENT: (page 130)

Specifying course options for a minor in Management, Policy and Community Health for the Health Economics/Health Services Research track

Health Economics/Health Services Research:

- **PHD 3910** *Health Economics*
- **PH 3915** *Methods for Economic Evaluation of Health Programs*
- **PHD 3930** *Econometrics in Public Health*
- **PHD 3931** *Advanced Econometrics*
- **PH 3940** *Healthcare Outcomes and Quality Research*
- **PH 3920** *Health Services Delivery and Performance*
- **PHD 3935** *Advanced Health Economics*
- **PHD 3926** *Health Survey Research Design*
- **PH 3998** *Decision Analysis*

CHANGE TO:

Health Economics (select 3 courses)

- **PHD 3910** *Health Economics*
- **PH 3915** *Methods for Economic Evaluation of Health Programs*
- **PHD 3930** *Econometrics in Public Health*
- **PHD 3931** *Advanced Econometrics*
- **PHD 3935** *Advanced Health Economics*
- **PH 3998** *Decision Analysis*

Health Services Research (select 3 courses)

- **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*

CURRENT: (page 131)

Change in course requirements for the minor in Community Health Practice for the DrPH

Community Health Practice

- DrPH Minor requirements
 - **PHD 1118** *Introduction to Qualitative Research Methods*
 - **PHD 3998** *Diversity*
 - **PHD 3998** *CHP Core I: Principles and Methods*

CHANGE TO:

Community Health Practice

- DrPH Minor requirements
 - **PHD 3998** *Working with Diverse Communities* (2 credits) or **PH 3800** *Working with Diverse Communities* (3 credits)
 - **PHD 3998** *Community Engagement and Community-Based Participatory Research*
 - **PHD 3998** *Practice-Based Methods and Design*

CURRENT: (page 138)

Inserting a new course

[Insert text below]

CHANGE TO:

PH 3845 *Quality, Cost, and Value Evaluation in Healthcare*
Revere, Tektiridis, 3 credits, c (hybrid course)

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.

CURRENT: (page 139)

Inserting a new course

[Insert text below]

CHANGE TO:

PHM 3918 *Geographic Information Systems Science*

Highfield, 3 credits, b

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.

PHD 3918 *Geographic Information Systems Science*

Highfield, 3 credits, b

This doctoral-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.

Interdepartmental Concentrations and Other Interdepartmental Courses

CURRENT: (page 160)

Adding special topics courses for PH 5098 including the courses for Archer Center fellows

PH 5098 *Special Topics in Interdepartmental Courses*

The Faculty in UTHealth School of Public Health, a, b, cd, credit hours vary among Special Topics courses

Selected Special Topics provide intensive coverage of interdepartmental theory and applications. Topics vary each semester. Previous topics have included:

Foundations of Scientific Writing in Public Health (see course description below)

Foundations of Academic Scientific Writing for Public Health

The History and Culture of Disease and Healing (see course description below)

Written Communication in Public Health Practice

CHANGE TO:

PH 5098 *Special Topics in Interdepartmental Courses*

The Faculty in UTHealth School of Public Health, a, b, cd, credit hours vary among Special Topics courses

Selected Special Topics provide intensive coverage of interdepartmental theory and applications. Topics vary each semester. Previous topics have included:

Culinary Medicine (in the Demonstration Kitchen; only available in Houston)

Foundations of Scientific Writing in Public Health (see course description below)

Foundations of Academic Scientific Writing for Public Health

Garden for Health (in the Holistic Garden; only available in Houston)

The History and Culture of Disease and Healing (see course description below)

Written Communication in Public Health Practice

Archer Center – Inside Washington: Policymaking from the Ground Up (3 credits)*

Archer Center Washington Internship (3 credits as **PH 9997 Practicum**)*

Archer Center Independent Study and Research (3 credits)*

*The Archer Center fellowship program requires prior approval and is a total of 9 credits. Students in the fellowship must register for the three courses above. Two are listed as PH 5098 Special Topics and one is listed as PH 9997 Practicum.

Grading, Conduct and Satisfactory Progress Policies

CURRENT: (page 193)

Clarification on repeating a course limit and GPA

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, the GPA will be calculated on letter-graded courses using only the grade from the repeated course. 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.

CHANGE TO:

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.

CURRENT: (page 193-194)

Removing the reference to “evaluation week” and clarifying information on student evaluations, satisfactory progress, and remediation plan

Satisfactory Progress

Satisfactory progress is evaluated on an individual basis by a student’s advisor and for advisory committee members. Evaluation week for all students is scheduled at the end 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 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 Assistant Dean for Academic Affairs and Student Services 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 assistant dean.

The plan should be developed by the advisor and the student and sent to the Assistant Dean for Academic Affairs and Student Services 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 faculty 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.

CHANGE TO:

Satisfactory Progress

Satisfactory progress is evaluated on an individual basis by a student's advisor and for advisory committee members. Evaluations for all students are required at least one time in 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 Assistant Dean for Academic Affairs and Student Services 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 assistant dean.

The plan should be developed by the advisor and the student and sent to the Assistant Dean for Academic Affairs and Student Services 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.

The University of Texas School of Public Health at Houston

2016-2018 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.

This catalog is a general information publication only. It is not intended to nor does it contain all regulations that relate to students. Applicants, students, and faculty are referred to The University of Texas Health Science Center at Houston (UTHealth) General Catalog. The provisions of this catalog and/or the General Catalog do not constitute a contract, express or implied, between any applicant, student, or faculty member and The University of Texas School of Public Health at Houston (UTHealth School of Public Health) or The University of Texas System. The UTHealth School of Public Health reserves the right to withdraw courses at any time, and to change fees or tuition, calendar, curriculum, degree requirements, graduation procedures, and any other requirements affecting students. Changes will become effective whenever the proper authorities so determine and will apply to both prospective and current students.

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, national origin, religion, sex, sexual orientation, gender expression or gender identity, age, veteran status or disability.

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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 diverse graduates are professional and innovative leaders of population health programs in universities, the private sector, and government organizations in Texas and across the nation. We are continually challenging ourselves to expand the 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 works with people and entire communities to keep them 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 Texas and Texans — our faculty and students have been doing so for nearly 50 years.

We are doing some of the most exciting 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, when you do get sick and you do need to go to a hospital, it is the people from UTHealth School of Public Health who are leading the way through research and education 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.

Research is the engine that drives advanced education and modern health care. 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 great institutions, great people, and patient visits is unsurpassed anywhere. 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 strong from competition, it will become great through cooperation and collaboration.

I am the luckiest person on earth to have the privilege to work with so many varied, interesting, competent, and smart 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 CALENDAR YEAR
2016 – 2017

<u>Fall Semester 2016</u>	
First Day of Classes	August 29
Last Day of Classes	December 9
Final Exams	December –12 - 16
<u>Spring Semester 2017</u>	
First Day of Classes	January 9
Last Day of Classes	April 28
Final Exams	May 1 – 5
<i>Spring Break</i>	<i>March 13 – 17</i>
<u>Summer Sessions 2017</u> <i>12 Weeks</i>	
First Day of Classes	May 22
Last Day of Classes	August 11
Final Exams	August 14 - 15
Summer Session I <i>6 Weeks</i>	
First Day of Classes	May 22
Last Day of Classes	June 29
Final Exams	June 30
Summer Session II <i>6 Weeks</i>	
First Day of Classes	July 5
Last Day of Classes	August 11
Final Exams	August 14 – 15

*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>*

UTHEALTH SCHOOL OF PUBLIC HEALTH
ACADEMIC CALENDAR YEAR
2017 – 2018

<u>Fall Semester 2017</u>	
First Day of Classes	August 28
Last Day of Classes	December 8
Final Exams	December 11 – 15
<u>Spring Semester 2018</u>	
First Day of Classes	January 8
Last Day of Classes	April 27
Final Exams	April 30 – May 4
<i>Spring Break</i>	<i>March 12 – 16</i>
<u>Summer Sessions 2018</u> <i>12 Weeks</i>	
First Day of Classes	May 21
Last Day of Classes	August 13
Final Exams	August 14 – 15
Summer Session I <i>6 weeks</i>	
First Day of Classes	May 21
Last Day of Classes	July 2
Final Exams	July 3
Summer Session II <i>6 weeks</i>	
First Day of Classes	July 5
Last Day of Classes	August 13
Final Exams	August 14 – 15

*Holidays will be announced in the schedule of classes.
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 For the complete and most current academic calendar, please go to the Office of the
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<https://www.uth.edu/registrar/calendars/academic-calendar-academic.htm>*

ADMINISTRATIVE OFFICERS

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Dean

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Interim Campus Dean
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Austin Campus

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Director of Administrative Services

Janelle Rios, PhD

Director of Public Health Practice and
Career Services

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Director of Library Services

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 (SACSCOC) Commission on Colleges 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.

CAMPUSES

UTHealth School of Public Health has a system of six campuses 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 various distance education 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.

The University of Texas School of Public Health at Houston – Austin Campus (Austin Campus)

Campus Dean: Cheryl L. Perry, 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 is currently housed at 1616 Guadalupe Street, in the Administration building near campus.

Degree and Non-degree Programs

The Austin Campus offers public health education, including all the non-degree certificate programs the school offers, as well as the Customized MPH, MPH in Epidemiology, MPH in Health Promotion/Health Education, DrPH in Health Promotion/Health Education, MS in Epidemiology, PhD in Epidemiology, and PhD in Behavioral Sciences programs. These degree programs are described under the department listings. There are three dual degree programs with UT Austin's School of Social Work (MSSW/MPH) and the Lyndon B. Johnson School of Public Affairs (MGPS/MPH, MPAff/MPH).

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.

The University of Texas School of Public Health at Houston – Brownsville Campus (Brownsville Campus)

Campus Dean: Joseph B. McCormick, MD

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.

Degree and Non-degree Programs

The Brownsville Campus offers public health education, including all the non-degree certificate programs the school offers, as well as the Customized MPH, MPH in Epidemiology, MPH in Health Promotion/Health Education, DrPH in Health Promotion/Health Education, MS in Epidemiology, and PhD in Epidemiology programs. These degree programs are described under the department listings. There is a dual degree program with The University of Texas Rio Grande Valley (MBA/MPH).

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.

The University of Texas School of Public Health at Houston – Dallas Campus (Dallas Campus)

Campus Dean: Bijal Balasubramanian, PhD, MPH, MBBS

The [Dallas Campus](#) was established in 1998 to offer graduate-level courses leading to the Master of Public Health (MPH) degree. The academic program is 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.

Degree and Non-degree Programs

The Dallas Campus offers public health education, including all the non-degree certificate programs the school offers, as well as the Customized MPH, MPH in Epidemiology, MPH in Health Promotion/Health Education, DrPH in Health Promotion/Health Education, MS in Epidemiology, PhD in Behavioral Science, and PhD in Epidemiology programs. These degree programs are described under the department listings. There are dual degree programs with The University of Texas at Arlington (MSW/MPH) and with the UT Southwestern Medical Center at Dallas (MD/MPH).

The programs at the Dallas Campus emphasize the particular health problems of the large metropolitan area of the Dallas/Fort Worth metroplex, as well as issues relating to populations and communities in the North Texas and East Texas regions.

The University of Texas School of Public Health at Houston – El Paso Campus (El Paso Campus)

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

The [El Paso Campus](#) was established in 1992 in collaboration with The University of Texas at El Paso (UTEP) and is located on the UTEP campus, at 1101 N. Campbell.

Degree and Non-degree Programs

The El Paso Campus offers public health education, including all the non-degree certificate programs the school offers, as well as the Customized MPH, MPH in Health Promotion/Health Education, and DrPH in Health Promotion/Health Education programs. These degree programs are described under the department listings. In addition to the MPH curriculum, the El Paso Campus provides opportunities in-depth study in behavioral sciences and environmental sciences via educational collaborations with UTEP. In-depth MPH coursework is also available in epidemiology and biostatistics via distance education courses from the Houston Campus. There is a dual degree program, MD/MPH, with Texas Tech University Health Sciences Center El Paso, Paul L. Foster School of Medicine.

The programs at the El Paso Campus include public health issues with international implications, as well as 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 bicultural milieu.

The University of Texas School of Public Health at Houston

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 a multiple of health institutions reside, and stands as the leading health care destination for people all over the world.

Degree and Non-degree Programs

The Houston Campus offers public health education, including all the non-degree certificate programs the school offers, as well as the Customized MPH, MPH in Biostatistics, MPH in Occupational and Environmental Health, MPH in Epidemiology, MPH in Health Promotion/Health Education, MPH in Community Health Practice, MPH in Health Services Organization, MPH in Healthcare Management, DrPH in Community Health Practice, DrPH in Epidemiology, DrPH in Occupational and Environmental Health, DrPH in Health Promotion/Health Education, MS in Biostatistics, MS in Epidemiology, PhD in Behavioral Sciences, PhD in Biostatistics, PhD in Epidemiology, PhD in Environmental Sciences, and PhD in Management and Policy Sciences. These degree programs are described under the department listings. There are several dual degree programs with Houston campus and other institutions, please see the dual degree section below for the full listing.

The University of Texas School of Public Health at Houston – San Antonio Campus (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.

Degree and Non-degree Programs

The San Antonio Campus offers public health education, including all the non-degree certificate programs the school offers, as well as the Customized MPH, MPH in Epidemiology, MPH in Health Promotion/Health Education, DrPH in Community Health Practice, DrPH in Occupational and Environmental Health, MS in Epidemiology, and PhD in Epidemiology programs. These degree programs are described under the department listings. There are dual degree programs with UT Health Science Center at San Antonio (MD/MPH) and The University of Texas at San Antonio College of Business (MBA/MPH).

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.

WRITING ASSESSMENT

At first matriculation, all incoming degree-seeking and certificate students to UTHealth School of Public Health are required to take a writing assessment test during or immediately following orientation and prior to course registration. The result of the writing assessment will determine the level of guidance to be provided to students for improvement in their writing skills. This guidance may include the following: a notice that no writing remediation will be recommended, a recommendation to take specific writing courses offered by the school, a recommendation to take a more basic writing course(s) at a local university/community college, or a recommendation to take an extramural course designed for non-native English-speaking students. Students will be responsible for any costs incurred by having to take additional writing courses. All recommended remediation(s) must be completed within the specified time frame provided at the time of the writing assessment. Satisfactory completion of the requirements made for improving writing skills must be met in order to successfully proceed through respective degree plans. Failure to complete the required writing recommendations can result in the student being denied registration for courses in subsequent terms. Depending on the writing assessment scores, some students will be required to retake the writing assessment one year after matriculation.

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 the Certificate in Public Health, Certificate in Maternal and Child Health, Certificate in Health Disparities, and Joint Certificate in Public Health Informatics with the UTHealth School of Biomedical Informatics. In addition, admitted non-degree students who want to gain knowledge in particular topics may take individual courses.

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 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.

Please note that it is not possible to earn a degree by taking courses only at night or online. Students may take no more than 50 percent of their degree program in online courses.

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.

Optional Interdepartmental Concentrations

In addition to the degree programs described below, any student may add an interdepartmental concentration in one (or more) of the following:

Global Health
Health Disparities
Leadership Studies
Maternal and Child Health
Nutrition and Public Health
Physical Activity and Health

Concentrations consist of a curriculum designed to address a problem or area of public health concern.

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 below 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.

Major Areas of Study

- Biostatistics*
- Community Health Practice*
- Epidemiology*
- Health Promotion/Health Education*
- Health Services Organization*
- Healthcare Management*
- Occupational and Environmental Health*
- Customized MPH*

Campus MPH Programs

- Austin Campus
 - Customized*
 - Epidemiology*
 - Health Promotion/Health Education*
- Brownsville Campus
 - Customized,*
 - Epidemiology*
 - Health Promotion/Health Education*
- Dallas Campus
 - Customized*
 - Epidemiology*
 - Health Promotion/Health Education*
- El Paso Campus
 - Customized*
 - Health Promotion/Health Education*
- Houston Campus
 - Customized*
 - Biostatistics*
 - Community Health Practice*
 - Epidemiology*
 - Health Promotion/Health Education*
 - Health Services Organization*

Healthcare Management
Occupational and Environmental Health
San Antonio Campus
Customized
Epidemiology
Health Promotion/Health Education

Optional Interdepartmental Concentrations

Global Health
Health Disparities
Leadership Studies
Maternal and Child Health
Nutrition and Public Health
Physical Activity and Health

Concentrations consist of a curriculum designed to address a problem or area of public health concern.

Customized MPH Program

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

- students in Austin, Brownsville, Dallas, El Paso, and San Antonio;
- students admitted to any dual degree program; and
- students in the Dietetic Internship.

Students eligible for the customized MPH have the option of electing an MPH major from those listed above 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 choose from a list of 10-20 competencies to be met in a public health focus area. These competencies are in addition to the MPH core and cross-cutting 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 Student Services website (<https://sph.uth.tmc.edu/content/uploads/2011/12/CHANGEOFMOD-DIS.pdf>).

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 career goal statement and may include a curriculum vitae, copies of reports, articles, recommendations, or other written material believed to reflect such potential;
- Graduate Record Examination (GRE) scores are required for all MPH degree applicants. GRE scores are reviewed by the Admissions Committee as one factor among others. An

exemption from the GRE requirement may be requested for applicants holding previous doctoral-level degrees from accredited U.S. or Canadian universities or for international medical graduates who hold Educational Commission for Foreign Medical Graduates certification;

- All international applicants must take the Test of English as a Foreign Language (TOEFL). This requirement applies even if you attended a U.S. undergraduate or graduate institution, or had postsecondary education conducted in English. 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. Test scores are valid for 2 years from the test date. Have the scores forwarded to SOPHAS using the reporting code 5688. No department code is needed. Exceptions to this requirement:
 1. If you are a Permanent Resident or Citizen of the United States
 2. The applicant is a citizen of a country where the sole native language is English
 3. If you earned a bachelor's degree or doctoral degree from the United States
 4. Applicants from the following English-speaking countries may be exempted from submitting TOEFL scores: Australia, Bahamas, Canada, Gambia, Ghana, Ireland, Jamaica, Liberia, New Zealand, Seychelles, Sierra Leone, Trinidad and Tobago, Uganda, United Kingdom, Zambia, and Zimbabwe
 5. 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" section for a list of required application materials, and "Admissions Process" section for factors considered in the admission decision.

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 **PHM 5010 Ethics in 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 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 completed intramurally if the project interacts with practice agencies. Student are expected to spend of at least 12 hours per week

(approximately 180-200 hours total) at the practicum site. 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 the **PH 9996 Capstone Course for MPH Students** or can take the form of a thesis or 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 both culminating experience options, students investigate public health issues, generated 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 Assistant Dean 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.

Biostatistics

PH 1690 *Foundations of Biostatistics (Available Online)*

PH 1700 *Intermediate Biostatistics – permission required (Available Online)*

PH 1690 is required for all majors. PH 1700 is required for majors in Biostatistics and Epidemiology and is highly recommended for majors in Environmental and Occupational Health Sciences (EOHS). Students majoring in Health Promotion and Behavioral Sciences or the three major areas from the department of Management, Policy and Community Health (Community Health Practice, Healthcare Management and Health Services Organization) may take only PH 1690.

Epidemiology

PHM 2610 *Fundamentals of Epidemiology (Available Online)*

PHM 2612 *Epidemiology I*

PHM 2612 is required for majors in Epidemiology; non-majors meet the requirement by taking PHM 2610.

Occupational and Environmental Health

Non-majors:

PHM 2110 *Overview of Environmental Health (Available Online), OR*

PHWM 2120 *Man's Impact on the Environment (Available Online Only)*

Majors (all are required):

PHWM 2100 *Foundations of Environmental and Occupational Health Sciences (Available Online)*

PHM 2101 *Contemporary Issues in Environmental and Occupational Health*

PHM 2130 *Recognition of Environmental and Occupational Hazards*, OR **PHM 2110** *Overview of Environmental Health*, OR **PHWM 2120** *Man's Impact on the Environment*, OR **PH 2245** *Fundamentals of Industrial Hygiene*

PH 2175 *Toxicology I: Principles of Toxicology*

PH 2205 *Health and Safety Program Management and Leadership*

Health Promotion and Behavioral Sciences (HPBS)

Non-majors:

PHM 1110 *Social and Behavioral Aspects of Community Health (Available Online)*

Majors (both are required):

PHM 1111 *Health Promotion Theory and Methods I*

PHM 1112 *Health Promotion Theory and Methods II*

PHM 1111 and PHM 1112 Health Promotion Theory and Methods I and II is a two-course sequence required for majors in HPBS.

PHM 1111 may be taken in place of PHM 1110 at some campuses.

Management, Policy, and Community Health (MPACH)

PHM 3715 *Introduction to Management and Policy Sciences (Available Online)*

PHM 3715 is required for both majors and non-majors in Management, Policy and Community Health.

DOCTOR OF PUBLIC HEALTH

The Doctor of Public Health (DrPH) degree signifies distinguished scholarly accomplishment. It is primarily offered for those who plan careers involving professional practice, teaching, or community-based research. The DrPH degree is a minimum of 48 semester credit hours. Students will be affiliated with one of the departments listed below. In addition, students may elect an interdepartmental concentration.

Major Areas of Study

Community Health Practice

Epidemiology

Health Promotion/Health Education

Health Services Organization Program (not accepting students as of 4/3/13)

Occupational and Environmental Health

In order to complete a degree with appropriate public health breadth, DrPH students are required to complete either two minors or 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). It is strongly recommended that either the minor or breadth area be focused on leadership. 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.

Campus DrPH Programs

Austin Campus

Health Promotion/Health Education

Brownsville Campus

Health Promotion/Health Education

Dallas Campus

Health Promotion/Health Education

El Paso Campus

Health Promotion/Health Education

Houston Campus

Community Health Practice

Epidemiology

Health Promotion/Health Education

Occupational and Environmental Health

San Antonio Campus

Community Health Practice

Occupational and Environmental Health

Optional Interdepartmental Concentrations

Global Health

Health Disparities

Leadership Studies

Maternal and Child Health

Nutrition and Public Health

Physical Activity and Health

Concentrations consist of a curriculum designed to address a problem or area of public health concern.

Admission Requirements:

- Prior MPH degree or equivalent preparation from a regionally accredited university or college;
- An original goal statement;
- 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 doctoral programs;
- All international applicants must take the Test of English as a Foreign Language (TOEFL). This requirement applies even if you attended a U.S. undergraduate or graduate institution, or had postsecondary education conducted in English. 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. Test scores are valid for 2 years from the test date. Have the scores forwarded to SOPHAS using the reporting code 5688. No department code is needed. Exceptions to this requirement:
 1. If you are a Permanent Resident or Citizen of the United States
 2. The applicant is a citizen of a country where the sole native language is English
 3. If you earned a bachelor's degree or doctoral degree from the United States
 4. Applicants from the following English-speaking countries may be exempted from submitting TOEFL scores: Australia, Bahamas, Canada, Gambia, Ghana, Ireland, Jamaica, Liberia, New Zealand, Seychelles, Sierra Leone, Trinidad and Tobago, Uganda, United Kingdom, Zambia, and Zimbabwe
 5. 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" section for a list of required application materials, and "Admissions Process" section for factors considered in the admission decision.

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). 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 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 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 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 Assistant Dean 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 Assistant Dean of Academic Affairs and Student Services. Under special circumstances, a second one-year extension may be granted.

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. 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. The MS degree is a minimum of 36 semester credit hours. 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.

Major Areas of Study

Biostatistics
Environmental Sciences (currently inactive)
Epidemiology

Campus MS Programs

Austin Campus – *Epidemiology*
Brownsville Campus – *Epidemiology*
Dallas Campus – *Epidemiology*
Houston Campus – *Biostatistics; Epidemiology*
San Antonio Campus – *Epidemiology*

Optional Interdepartmental Concentrations

Global Health
Health Disparities
Leadership Studies
Maternal and Child Health
Nutrition and Public Health
Physical Activity and Health

Concentrations consist of a curriculum designed to address a problem or area of public health concern.

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 goal statement;
- Graduate Record Examination (GRE) scores are required for all MS degree applicants;
- All international applicants must take the Test of English as a Foreign Language (TOEFL). This requirement applies even if you attended a U.S. undergraduate or graduate institution, or had postsecondary education conducted in English. 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. Test scores are valid for 2 years from the test date. Have the scores forwarded to SOPHAS

using the reporting code 5688. No department code is needed. Exceptions to this requirement:

1. If you are a Permanent Resident or Citizen of the United States
 2. The applicant is a citizen of a country where the sole native language is English
 3. If you earned a bachelor's degree or doctoral degree from the United States
 4. Applicants from the following English-speaking countries may be exempted from submitting TOEFL scores: Australia, Bahamas, Canada, Gambia, Ghana, Ireland, Jamaica, Liberia, New Zealand, Seychelles, Sierra Leone, Trinidad and Tobago, Uganda, United Kingdom, Zambia, and Zimbabwe
 5. 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" section for a list of required application materials, and "Admissions Process" section for factors considered in the admission decision.

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 (only three (3) credit hours of practicum, if taken) and three (3) credit hours of thesis count toward the minimum of 36 credit hours; therefore, at least 30 credit hours of courses other than practicum or thesis must be successfully completed);
- Satisfactory completion of one epidemiology course, if one is not already covered in the major, minor, or breadth areas;
- Satisfactory completion of **PHM 5010 Ethics in Public Health**;
- Satisfactory completion of one of the following courses: **PHM 3715 Introduction to Management and Policy Sciences** OR **PHM 3620 Principles and Practice of Public Health** OR **PH 5098 Special Topics- The History and Culture of Disease and Healing** in their first year;
- 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 ONE of the following courses in the first year of their MS degree program:

- **PHM 3715 Introduction to Management and Policy Sciences**
- **PHM 3620 Principles and Practice of Public Health**
- **PH 5098 Special Topics- The History and Culture of Disease and Healing**

Practicum

A practicum 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, but it is not required for the MS degree.

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 Assistant Dean of Academic Affairs and Student Services.

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. Curricula leading to this degree are offered in the following fields of study:

Behavioral Sciences

Biostatistics

Environmental Sciences

Epidemiology

Management and Policy Sciences (students select one of the tracks below)

Health Economics/Health Services Research

Healthcare Management/Health Policy

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.

Campus PhD Programs

Austin Campus

Behavioral Sciences

Epidemiology

Brownsville Campus

Epidemiology

Dallas Campus

Behavioral Sciences

Epidemiology

Houston Campus

Behavioral Sciences

Biostatistics

Environmental Sciences

Epidemiology

Management and Policy Sciences

San Antonio Campus

Epidemiology

Optional Interdepartmental Concentrations

Global Health

Health Disparities

Leadership Studies

Maternal and Child Health

Concentrations consist of a curriculum designed to address a problem or area of public health concern.

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 or Epidemiology departments.

Biostatistics:

- Prior bachelor's degree in a mathematical, biomedical, or physical science from a regionally accredited university or college;
- An original goal statement;
- Outstanding promise of scholarly accomplishment and research capability;
- Graduate Record Examination (GRE) scores are required for all doctoral programs;
- All international applicants must take the Test of English as a Foreign Language (TOEFL). This requirement applies even if you attended a U.S. undergraduate or graduate institution, or had postsecondary education conducted in English. 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. Test scores are valid for 2 years from the test date. Have the scores forwarded to SOPHAS using the reporting code 5688. No department code is needed. Exceptions to this requirement:
 1. If you are a Permanent Resident or Citizen of the United States
 2. The applicant is a citizen of a country where the sole native language is English
 3. If you earned a bachelor's degree or doctoral degree from the United States
 4. Applicants from the following English-speaking countries may be exempted from submitting TOEFL scores: Australia, Bahamas, Canada, Gambia, Ghana, Ireland, Jamaica, Liberia, New Zealand, Seychelles, Sierra Leone, Trinidad and Tobago, Uganda, United Kingdom, Zambia, and Zimbabwe
 5. 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 listed 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 goal statement;
- Outstanding promise of scholarly accomplishment and research capability;
- Graduate Record Examination (GRE) scores are required for all doctoral programs;
- All international applicants must take the Test of English as a Foreign Language (TOEFL). This requirement applies even if you attended a U.S. undergraduate or graduate institution, or had postsecondary education conducted in English. 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. Test scores are valid for 2 years from the test date. Have the scores forwarded to SOPHAS using the reporting code 5688. No department code is needed. Exceptions to this requirement:

1. If you are a Permanent Resident or Citizen of the United States
 2. The applicant is a citizen of a country where the sole native language is English
 3. If you earned a bachelor's degree or doctoral degree from the United States
 4. Applicants from the following English-speaking countries may be exempted from submitting TOEFL scores: Australia, Bahamas, Canada, Gambia, Ghana, Ireland, Jamaica, Liberia, New Zealand, Seychelles, Sierra Leone, Trinidad and Tobago, Uganda, United Kingdom, Zambia, and Zimbabwe
 5. 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 listed 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 goal statement;
- Outstanding promise of scholarly accomplishment and research capability;
- Graduate Record Examination (GRE) scores are required for all doctoral programs;
- All international applicants must take the Test of English as a Foreign Language (TOEFL). This requirement applies even if you attended a U.S. undergraduate or graduate institution, or had postsecondary education conducted in English. 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. Test scores are valid for 2 years from the test date. Have the scores forwarded to SOPHAS using the reporting code 5688. No department code is needed. Exceptions to this requirement:
 1. If you are a Permanent Resident or Citizen of the United States
 2. The applicant is a citizen of a country where the sole native language is English
 3. If you earned a bachelor's degree or doctoral degree from the United States
 4. Applicants from the following English-speaking countries may be exempted from submitting TOEFL scores: Australia, Bahamas, Canada, Gambia, Ghana, Ireland, Jamaica, Liberia, New Zealand, Seychelles, Sierra Leone, Trinidad and Tobago, Uganda, United Kingdom, Zambia, and Zimbabwe
 5. 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" section for a list of required application materials, and "Admissions Process" section for factors considered in the admission decision.

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 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. Although PhD students are encouraged to include a practicum in their degree plan, but it is not required for the PhD degree.

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 Assistant Dean 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 Assistant Dean 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. Students in the dual degree program will receive a diploma from each degree program after meeting the individual requirements of each program.

JD/MPH Program (Houston Campus)

Students interested in health law and policy may apply for the JD/MPH Program. In this program, students study concurrently for an MPH degree from UTHealth School of Public Health and a JD degree from the University of Houston Law Center.

When possible and appropriate, the student's coursework at the two institutions is coordinated to provide a curriculum that integrates law with public health sciences. Students admitted to both institutions may transfer credits between institutions for appropriate coursework. However, prior approval is required, and the procedures of the institution receiving the academic credits must be followed. Typically, a student in the dual degree program develops a culminating experience that deals with a legal issue impacting public health. The culminating experience should demonstrate the student's mastery of the analytical methods used in public health and these methods' role in the development of public health policy.

Contact

Stephen H. Linder, PhD

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MD/MPH Program (Houston Campus)

Medical students at the John P. and Katherine G. McGovern Medical School at UTHealth may apply for the 5-year integrated MD/MPH Program. This program prepares the student of medicine for a career in academia or in specialized areas of medicine that are not taught as part of the traditional medical school curriculum. Students spend the fall and spring semesters at the UTHealth School of Public Health after the first, second, or third year of medical school. Interested students may apply early (as soon as possible after medical school acceptance) so that they can enroll in online classes during the summer before they begin medical school. This facilitates completion of the requisite hours needed for graduation. Students may also apply after they have begun medical school, but this may lengthen the MPH program beyond five (5) years. Students can also apply for the certificate program, which allows them to take courses online for which they can receive credit once they are admitted to UTHealth School of Public Health.

Students may start the certificate program during the summer before they enter medical school. Otherwise, students should apply during the winter of their first year of medical

school. Importantly, dual degree students cannot begin their year of full-time study at the UTHealth School of Public Health after graduating from McGovern Medical School.

The usual application procedures and deadlines should be followed at UTHealth School of Public Health, in consultation with the McGovern Medical School's Associate Dean for Educational Programs. Applicants to the MD/MPH Program are exempt from the GRE requirement.

Contacts

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Sam Neher, MS

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MD/MPH Program (Dallas Campus)

Medical students at UT Southwestern Medical School may apply for the four-year integrated MD/MPH Program. This program provides an accelerated, 4-year course load option to efficiently prepare young professionals for the breadth of their future professions. It provides the medical student with expanded career options and opens doors for substantial opportunities in research, administration, and teaching. Once admitted, students are enrolled in pre-defined core courses for four (4) years: the first year is comprised of basic science courses; the second year is structured around organ systems and clinical medicine; the third year involves students in rotations related to direct patient care; and the fourth year affords students opportunities in acute care/ambulatory rotations, internships, and electives. The UTHealth School of Public Health curriculum will be structured to allow MPH credit from MS courses and electives taken during Years 1 and 2, an optional community health fellowship, and select clinical rotations. Multiple courses have been approved for dual credit through UT Southwestern Medical Center, but no more than 12 dual-credit hours may count toward completion of the MPH degree.

The usual application procedures should be followed at UTHealth School of Public Health. However, early applications will be accepted so that an admissions decision may be made prior to the applicant's selection of a UT System medical school.

Contact

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MD/MPH Program (San Antonio Campus)

Medical students at UT School of Medicine in San Antonio may apply for the four-year integrated MD/MPH Program. This program is integrated so that multiple courses and learning experiences in the medical school count toward the MPH degree program. Students are advised to complete two public health core courses in the summer prior to beginning medical school. The remaining public health courses are completed during the 4-year medical school curriculum, with the option of a fifth year.

The usual application procedures should be followed at UTHealth School of Public Health. However, early applications will be accepted so that an admissions decision may be made prior to the applicant's selection of a UT System medical school.

Contact

Melissa Valerio, PhD, MPH
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MD/MPH Program (El Paso Campus)

Medical students at the Texas Tech University Health Sciences Center El Paso Paul L. Foster School of Medicine may apply for the four-year integrated MD/MPH Program. This program is integrated so that multiple courses and learning experiences in the medical school count toward the MPH degree program. Students are advised to complete some of the public health core courses in the summer prior to beginning medical school. The remaining public health courses are completed during the 4-year medical school curriculum.

The usual application procedures should be followed at UTHealth School of Public Health. However, early applications will be accepted so that an admissions decision may be made prior to the applicant's selection of a UT System medical school.

Contact

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MD/MPH Program (Baylor College of Medicine)

Medical students at Baylor College of Medicine (BCM) may apply for the five-year integrated MD/MPH Program. Students usually earn both degrees in five (5) years of full-time study. Students should apply to UTHealth School of Public Health at the same time as BCM, although application decisions will be considered separately. During the first three (3) years of medical school, the MPH curriculum is integrated with the standard medical school curriculum. The fourth year is spent primarily at UTHealth School of Public Health, and the fifth and final year is spent at BCM. Students may also apply after they have begun medical school, but this may lengthen the MPH program beyond five (5) years.

The usual application procedures should be followed at UTHealth School of Public Health. However, early applications will be accepted so that an admissions decision may be made prior to the applicant's notification of admission to Baylor College of Medicine.

Contacts

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MSN/MPH Program (Houston Campus)

Students interested in pursuing concurrent MSN and MPH degrees may apply to the integrated MSN/MPH Program available through UTHealth School of Public Health and The University of Texas School of Nursing at Houston (UTHealth School of Nursing). Those interested in the program must be admitted separately to each school and must meet the admission and degree requirements of each school. Students admitted to this program, however, can meet the requirements of both degree programs with fewer credit hours than if the degrees were earned separately and may submit a single thesis. Students enrolled in

this program will emphasize public health skills at UTHealth School of Public Health, clinical skills at the UTHealth School of Nursing, and the combining of these skills through courses taught by faculty from both schools. Students who are contemplating entering this program are strongly encouraged to seek further information before applying.

Contact

Sam Neher, MS

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MSW/MPH Program (Houston Campus)

Students interested in combining social work and public health skills may apply to the MSW/MPH Program available through UTHealth School of Public Health and the University of Houston Graduate College of Social Work. This program was developed to concurrently equip students with the social work and public health skills needed to address the complex and mutually reinforcing health and social problems that affect individuals and populations.

Both degree programs require completion of specific courses and acquisition of specific competencies, but each will give academic credit for a limited number of courses completed at the other institution. The development of specific academic programs, as well as scheduling of courses, field work, and practica for individual students are guided by advisory committees comprising of faculty from both institutions.

Contact

Sam Neher, MS

Samuel.E.Neher@uth.tmc.edu

MSSW/MPH Program (Austin Campus)

Students interested in combining social work and public health skills may apply to the 3-year integrated MSW/MPH Program available through UTHealth School of Public Health and the UT Austin School of Social Work. This program was developed to concurrently equip students with the social work and public health skills needed to understand and improve the health and well-being of individuals and populations. By integrating the MSSW and MPH degrees, it minimizes duplication in course content and reduces the time and costs associated with pursuing each degree independently. Students are expected to integrate the knowledge and learning experiences through shared credit courses as well as practicum and culminating (thesis) experiences. Students will work with an advisory committee comprising of faculty from both institutions.

Contacts

Steve Kelder, PhD, MPH

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Cheryl L. Perry, PhD

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MS or PhD Biomedical Informatics/MPH Program (Houston Campus)

Students interested in pursuing concurrent MS or PhD and MPH degrees may apply to the MS or PhD/MPH Program available through UTHealth School of Public Health and The University of Texas School of Biomedical Informatics at Houston (UTHealth School of Biomedical Informatics) This program is designed to provide students with the skills to be leaders in the field of Public Health Informatics. It provides an integrated curriculum that includes a number

of shared courses as well as a practicum and/or the thesis topic in the application of informatics in areas of public health. The selection of specific academic programs, as well as scheduling of specific courses, field work, and practica for individual students is guided by an advisory committee comprising of faculty from both institutions.

Contact

Ross Shegog, PhD, MPH

Ross.Shegog@uth.tmc.edu

MBA/MPH Program (Brownsville Campus)

Students interested in pursuing concurrent MBA and MPH degrees may apply to the MBA/MPH Program available through UTHealth School of Public Health and The University of Texas Rio Grande Valley. This program is designed to prepare students from many different academic backgrounds, experiences, and interests for careers in the fields of public health, health services, research, policy development, economics, business, management, and operations. It provides opportunities to gain advanced knowledge and skills needed to assume upper-level management and leadership positions in a broad range of health- and business-related industries and career tracks. The curriculum is specifically designed to provide students a breadth and depth of academic knowledge and perspective, supported through classroom and practice-based experiences.

Contact

Joseph McCormick, MD

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MBA/MPH Program (San Antonio Campus)

Students interested in pursuing concurrent MBA and MPH degrees may apply to the 3-year integrated MBA/MPH Program available through UTHealth School of Public Health and UT-San Antonio College of Business. This program equips students with business administration and public health skills. It allows students to complete both degrees more efficiently and with fewer total credit hours than if each degree were done separately.

Contact

Melissa Valerio, PhD, MPH

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MGPS/MPH Program (Austin Campus)

Students interested in pursuing concurrent Master of Global Policy Students (MGPS) and MPH degrees may apply to the MGPS/MPH Program available through UTHealth School of Public Health and the UT Austin Lyndon B. Johnson School of Public Affairs. This program combines advanced studies of globalization with a focus on the issues, organizations, and skills needed to make meaningful contributions in the emerging field of international health. The program is structured so that students can earn both degrees simultaneously in approximately three (3) academic years. As opportunities increase for graduates with skills appropriate to the evolving global environment, this program is an important addition to the graduate offerings at both institutions.

MPAff/MPH Program (Austin Campus)

Students interested in pursuing concurrent Master of Public Affairs (MPAff) (and MPH degrees may apply to the MPAff/MPH Program available through UTHealth School of Public Health

and the UT Austin Lyndon B. Johnson School of Public Affairs. This program combines advanced studies of government, nonprofit agencies, and policy with a focus on the issues, organizations, and skills needed to make meaningful contributions in the growing field of public health. The program is structured so that students can earn both degrees simultaneously in approximately three (3) academic years. This program will provide students with a deeper understanding of government and non-profit institutions and their financing and management, along with more detailed training in public health. The demand for MPAff/MPH graduates is likely to expand rapidly in the future, so this program is an important addition to the graduate offering at both institutions.

Contacts for both MGPS/MPH and MPAff/MPH

Steve Kelder, PhD, MPH

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Cheryl L. Perry, PhD

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MSW/MPH Program (Dallas Campus)

Students interested in combining social work and public health skills may apply to the integrated MSW/MPH Program available through UTHealth School of Public Health and the UT Arlington School of Social Work. This program was developed to respond to the need for a greater integration of the knowledge and skills shared by social work and public health professionals. Students must apply to each school independently. UTHealth School of Public Health will recognize 12 credit hours taken at UT Arlington School of Social Work toward the MPH degree. Depending on which MSW program the student is enrolled (61- or 38-credit hour program), UT Arlington School of Social Work will recognize either 9 or 12 credit hours taken at UTHealth School of Public Health toward the MSW degree. This dual-degree program is generally designed to be completed in three (3) years.

Contact

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NON-DEGREE PROGRAMS

Non-degree programs provide students who do not want to pursue a formal degree an opportunity to take courses for credit at UTHealth School of Public Health. A special application procedure is required for admission as a non-degree student. The application and a description of the admissions process may be found on the UTHealth Office of the Registrar website at <https://www.uth.edu/registrar/>. 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.

Non-degree students who are not affiliated with a recognized educational collaboration or certificate program are allowed to take up to 16 semester credit hours of courses at UTHealth School of Public Health. These courses (i.e., up to 16 semester credit hours) 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. Students who are affiliated with a formal non-degree certificate program may take additional credit hours. 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.

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.

Contact

Linda Piller, MD, MPH

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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.

Contact

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Certificate in Public Health

The Certificate in Public Health program 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. The five courses (16 semester credit hours) in this non-degree program cover the core content of the disciplines that are basic to public health

and are available at all campuses and online. A certificate is awarded to students who pass all five courses. The Certificate in Public Health program is designed to be completed in one (1) year.

Contact

Silvia Santiago

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Certificate in Public Health Informatics

The Certificate in Public Health Informatics program is a joint program between UTHealth School of Biomedical Informatics and UTHealth School of Public Health. The non-degree program was created to address the growing emphasis of public health informatics at the national level and the increased market demand. It consists of five courses (16 semester credit hours) that provide the basic knowledge and skills in epidemiology, biostatistics, informatics, public health informatics, and one elective, and are available at all campuses and online. A certificate is awarded to students who pass all five courses. The Certificate in Public Health Informatics program is designed to be completed in one (1) year.

Contact

Ross Shegog, PhD, MPH

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Certificate in Maternal and Child Health

The Certificate in Maternal and Child Health program was created to provide public health professionals working in maternal and child health agencies and programs with a flexible and accessible curriculum intended to enhance skills in designing and implementing effective community-based maternal and child health programs. This non-degree program consists of four courses (12 semester credit hours) providing basic instruction and skills development in reproductive, perinatal, child, and adolescent health. Classes are available at all campuses and online. A background in epidemiology or biostatistics is required before admission to the program. Under certain circumstances, this requirement may be completed after admission to the program but before initiating program coursework. A certificate is awarded to students who pass all required courses. The Certificate in Maternal and Child Health program is designed to be completed in one (1) year.

Contact

Courtney E. Byrd-Williams, PhD

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Certificate in Health Disparities

The Certificate in Health Disparities program 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. Health disparities have been defined as differences in “the overall rate of disease incidence, prevalence, morbidity, mortality or survival rates.” Health disparities exist across race/ethnic groups, geographic residence, gender, age, and disability status. Determinants of health disparities are multi-factorial and include cultural factors, socioeconomic factors, racism/discrimination, and political factors. Public health professionals, health care practitioners and researchers play a critical role in identifying and ameliorating health disparities. This non-degree program consists of four courses plus two semesters of the Health Disparities Core Seminar (14 semester credit hours).

Students who do not have a background in epidemiology must complete **PHM 2610** *Fundamentals of Epidemiology* in addition to the required credits for the certificate. Classes are available at all campuses and online. A certificate is awarded to students who pass all required courses. The Certificate in Health Disparities program is designed to be completed in one (1) year.

Contact

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ADVANCED MPH PROGRAMS FOR UNDERGRADUATES – BS/MPH (4+1 PROGRAMS)

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. These educational agreements are listed as 4+1 Programs. UTHealth School of Public Health holds these agreements with the following institutions at each listed campus.

Austin Campus

College of Natural Sciences at The University of Texas at Austin and UTHealth School of Public Health

Contact

Cheryl L. Perry, PhD

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Brownsville Campus

The University of Texas at Brownsville and UTHealth School of Public Health

Contact

Joseph B. McCormick, MD

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Houston Campus

The University of Houston and UTHealth School of Public Health

Rice University and UTHealth School of Public Health

Contact

Sam Neher, MS

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San Antonio Campus

The University of Texas at San Antonio and UTHealth School of Public Health

Contact

Melissa Valerio, PhD, MPH

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SPECIAL PROGRAMS

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.

Program Director
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Residency Coordinator
Joy De Los Reyes
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Dietetic Internship

RD/MPH, RD/MS, RD/DrPH, RD/PhD

The Dietetic Internship Program offers the opportunity to pursue a dietetic internship in conjunction with a graduate degree in public health. 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/>.

Program Director
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Co-Director
Laura Moore, MEd, RD, LD
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JUST IN TIME COURSES

Intensive 1-week or 6-week courses are offered to provide graduate students with the skills needed for the semesters ahead. “Just in time” courses are skill-based courses that help students prepare for the written culminating experience option or dissertation. Check the course schedule for start and end dates when registering.

PHM 1116 *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)*

Fernandez, Markham, Springer, Valerio, 2 credits, b, c – intensive 1-week format course

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. 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.

Prerequisites: PH 1690, PHM 2610, and PHM 1111

PHD 1116 *Advanced Methods for Planning and Implementing Health Programs (Intervention Mapping)*

Fernandez, Markham, Springer, Valerio, 2 credits, b, c – intensive 1-week format course

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. In addition to the class project of choosing a health problem and developing an intervention plan, doctoral students will function in group leadership roles, and prepare a concept outline and abstract as part of preparation of class papers for publication. Furthermore, doctoral students will present their projects to the class. 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.

Prerequisites: PH1700, PHM 2610, and PHM 1111

PH 1119 *Qualitative Analysis*

McCurdy, 3 credits, b – intensive 1-week format course

This course provides the basic tools for analyzing ethnographic and other forms of qualitative data. Different analytical approaches are explored and examined. Students will explore the use of different types of analysis that are appropriate to the data project’s overarching theoretical approach and the topical focus of the study from which it was produced. Students will learn the basics of ATLAS.ti, a software program for coding textual and visual data. Preferably, students will analyze data collected in PH1118 or in another project conducted after that course is taken. The final paper will be the write up of their results. Other

coursework includes lectures, instruction and work with ATLAS.ti, discussions, and intensive group work on other data students will analyze as part of a team.

Prerequisites: PH 1118 or consent of instructor

PHD 1431 *Tools and Methods for Systematic Reviews and Meta-Analyses*

Mullen, Vonville, DeSantis, 2 credits, b (odd-numbered years), c (even-numbered years) – intensive 6-week format course (hybrid)

This 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 culminating experience or dissertation.

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

PH 5030 *Diabetes Seminar*

Moore, Piga-Plunkett, 1 credit, c – intensive 1-week format course

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. For ITV students, these cooking classes will be recorded and links will be provided for viewing.

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 5101 *Disparities in America: Working toward Social Change*

Schick and the Faculty in Health Disparities Concentration, 3 credits, a, c – intensive 1-week format course

This course examines the social and societal factors that are fundamental in formulating public policy objectives to reduce and ultimately eliminate health disparities in America. More than 25 years of research indicate that there are wide disparities in health throughout America. Health disparities include differences in the incidence, prevalence, mortality, and burden of diseases, as well as other adverse health conditions that exist when specific population subgroups are compared. It is now known that the distribution of health is not random, but that health is systematically distributed and according to different levels of social advantage. This course is offered in the fall semester at a member HDEART institution in Houston and videoconferenced to other member institutions outside of Houston. It will be taught at either the UTHealth School of Public Health, The University of Texas MD Anderson Cancer Center,

Rice University, University of Houston, or Texas Southern University. It is sometimes offered as a week-long summer course in June. Students who register for the summer course will be required to pay an additional fee of \$150, which is collected by the offering institution, other than UTHealth School of Public Health, to cover course materials given to students.

APPLICATION PROCEDURES AND DEADLINE DATES

Students enrolling in UTHealth School of Public Health must have a personal computer available to them. The school provides reduced software prices through the UT Bookstore for certain required software titles, including the Windows Operating System, Microsoft Office, and certain statistical software products. For compatibility purposes, students should consider first a computer running the latest version of the Windows Operating System. Over the past couple of years, UTHealth support for Macintosh computers has become more reliable, but the most supported platform is the Windows Operating System. All students are provided with a user account that offers access to the following: a feature-rich Web-based electronic mail application, an online-based instruction system in Canvas, the ability to connect personal wireless computers within school campuses, and a file repository and sharing system known as Secure Share.

Most school faculty utilize Canvas for course management and content delivery. Reliable and consistent access to the Internet is required in order to successfully access online course content. Software needs are dependent on academic fields and career goals. Hardware specifications depend on a variety of factors, including software, speed, and capacity. In general, students will need software for word processing, spreadsheets, data base management, statistics, and access to the Internet. Students with questions may contact UTHealth [Information Technology \(IT\) Services](#).

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

December 1 for fall semester priority deadline for scholarship consideration
March 1 for fall semester, all other applicants

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

October 1 – Spring Semester
March 1 – Summer Session
July 1 – Fall Semester

Applicants will be notified by mail of the Admissions Committee's decision within approximately 90 days of the application deadline, provided that all supporting materials are received by the application deadline.

Degree Program Application Procedures

Applications to all UTHealth 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 UTHealth 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/goal statement 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/goal statement 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:** Goal statements 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 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). Information and application booklets may be obtained by contacting the Educational Testing Service directly at <http://www.ets.org/toefl/>. This requirement applies even if you attended a U.S. undergraduate or graduate institution, or had postsecondary education conducted in English. 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. Test scores are valid for 2 years from the test date. Have the scores forwarded to SOPHAS using the reporting code 5688. No department code is needed. Exceptions to this requirement:

1. If you are a Permanent Resident or Citizen of the United States
 2. The applicant is a citizen of a country where the sole native language is English
 3. If you earned a bachelor's degree or doctoral degree from the United States
 4. Applicants from the following English-speaking countries may be exempted from submitting TOEFL scores: Australia, Bahamas, Canada, Gambia, Ghana, Ireland, Jamaica, Liberia, New Zealand, Seychelles, Sierra Leone, Trinidad and Tobago, Uganda, United Kingdom, Zambia, and Zimbabwe
 5. 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 translation is preferred, but not 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. Applicants holding previous doctoral-level degrees from accredited U.S. or Canadian universities may request an exemption from the GRE 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 in the United States at the time of application.
- For GRE scores on the former scale (prior to August 2011), a minimum combined score of 1,000 for the masters programs and 1,200 for doctoral programs on the verbal and quantitative sections of the General Test is preferred. For GRE exams taken after August 2011, a minimum 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. The GRE 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/goal statement, letters of recommendation;
- Educational goals (should be consistent with the chosen area of study): application, essay/goal statement, letter of recommendation;
- Career goals (especially the intent to practice public health in underserved and vulnerable communities): application, essay/goal statement, letters of recommendation;
- Motivation (description of any special obstacles or challenges that have been overcome to achieve goals thus far): college transcripts, essay/goal statement, letters of recommendation;
- Integrity: essay/goal statement, letters of recommendation;
- Community service (particularly service to diverse communities in need): application, essay/goal statement, 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
Attention: Admissions
1200 Herman Pressler, 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.

[myUTH](https://eportal.uth.tmc.edu) is available for applicants to check on the status of their application and supporting documents. Enrolled students may also use this service 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 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 UTHealth 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.*

NOTE: A total sum of 12 semester credit hours can be transferred from an accredited U.S. educational institution and applied to a degree program at UTHealth School of Public Health if not counted toward another awarded degree for students pursuing a dual degree program. 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 at <https://sph.uth.tmc.edu/academics/academic-affairs/>.

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 Assistant Dean 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 Assistant Dean 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 determined by The Texas Higher Education Coordinating Board and the UTHealth Administration. Tuition and fees are subject to change by The Texas Legislature and by The University of Texas System Board of Regents. See “Tuition and Fees” and “Tuition and Fees Payment Policy” subsections in the “General Information” section of the catalog and/or the “Tuition & Fee Schedule” on the UTHealth Office of the Registrar “Current Students Home” webpage at <https://www.uth.edu/registrar/current-students/index.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 UTHealth 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

Fall Semester

a
15 weeks

Spring Semester

b
15 weeks

Summer Session

c	d	cd
Session I 6 weeks	Session II 6 weeks	12 weeks

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
b	Course offered in the spring semester
c	Course offered in the first half of the summer session
d	Course offered in the second half of the summer session
cd	Course offered for the full summer session

Course credits generally equate with class hours per week per semester. For example, courses carrying four credit hours meet four (4) hours per week for a full semester.

Availability of courses is contingent upon sufficient registration.

Courses described in the following section are organized by department and are offered on a regular basis. The school also offers independent study courses and 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.

Deadline for Dropping Courses

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 Semester: 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, students must request to drop a course via the Office of the Registrar at myUTH. Students are required to obtain signatures from the instructor(s) and their academic advisor before submitting the request (form) to the Office of Academic Affairs and Student Services, RAS E-201.

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; 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.

BIostatISTICS

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 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.

The department also offers a minor course of study for MS, DrPH, and PhD students who are majoring in other public health disciplines. Courses required for the minor include **PH 1690 Foundations of Biostatistics**, **PH 1700 Intermediate Biostatistics** and at least two (for MS) and three (for doctoral) Biostatistics electives above PH 1700. **PH 1820 Regression Techniques** is strongly recommended for the minor for all degree programs. **PHD 3931 Advanced Econometrics** has also been approved as a course for a minor in Biostatistics.

The department also offers a breadth in bioinformatics (12 credit hours). Courses required for the bioinformatics breadth includes three courses selected from **PH 1980 Introduction to Genomics and Bioinformatics**; **PH 1982 Evolution of DNA and Protein Sequences**; **PH 1984 Population Genetics**; **PH 1985 Data Mining and Statistical Learning**; **PH 1986 Introduction to Statistical Genetics**; OR **PH 1998 Advanced Multivariate Analysis with Applications to Genomic Science**; and one course within the school and outside the Biostatistics and Epidemiology departments.

Centers

The Coordinating Center for Clinical Trials (CCCT), located within the Department of Biostatistics, 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 program in Biostatistics 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. The MPH degree is a minimum of 45 semester credit hours.

Special Entrance Requirements

Applicants to the MPH program should have strong quantitative skills and at least one (1) year of calculus. GRE scores are required of all applicants, and TOEFL scores are required of all international applicants.

Course of Study

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

- **PH 1690** *Foundations of Biostatistics*, **PH 1700** *Intermediate Biostatistics*, and **PH 1820** *Regression Techniques*
- At least two courses from: **PH 1821** *Applied Multivariate Analysis for Biostatistics*, **PH 1830** *Categorical Data Analysis*, or **PH 1831** *Survival Analysis*

In addition to biostatistics courses, MPH students are required to take courses that satisfy the core MPH curriculum requirements of the other four Public Health disciplines (these courses are described elsewhere in this Catalog). Students will also select biostatistics electives from among the following courses: theory of biostatistics, linear models, generalized linear models, applied multivariate analysis, survival analysis, categorical data analysis, methodology of clinical trials, distribution free methods, time series analysis, stochastic processes, experimental design, statistical programming, or Special Topics courses.

All MPH students in Biostatistics are also required to take **PHM 5010** *Ethics in Public Health*.

Additionally, the MPH degree requires the completion of a formal practicum and a culminating experience.

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 degree 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. Graduates of the MS program are expected to have prepared themselves to assume intermediate statistical posts in government, private health agencies, or health research programs. 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.

Course of Study

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

- **PH 1820** *Regression Techniques* and **PH 1821** *Applied Multivariate Analysis for Biostatistics*
- **PH 1830** *Categorical Data Analysis*
- **PH 1831** *Survival Analysis*
- **PH 1910** and **PH 1911** *Theory of Biostatistics I and II*

Students will also select biostatistics elective courses from among the following courses: linear models, generalized linear models, methodology of clinical trials, distribution free methods, time series analysis, stochastic processes, experimental design, statistical computing, Bayesian statistics, or Special Topics courses. Graduates are expected to have acquired knowledge in at least one minor area selected from one of the other Public Health disciplines (the courses are described elsewhere in this catalog).

All MS students in Biostatistics are also required to complete the following:

- One of the following courses in the first year of their MS degree program: **PHM 3715** *Introduction to Management and Policy Sciences*, OR **PHM 3620** *Principles and Practice of Public Health*, OR **PH 5098** *Special Topics- The History and Culture of Disease and Healing*
- One epidemiology course (if one is not already covered in the major or minor);
- **PHM 5010** *Ethics in Public Health*.

All MS students in Biostatistics must give an oral presentation of their thesis defense.

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 program 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. The PhD is a minimum of 48 semester credit hours. 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.

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.

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

- **PH 1820** *Regression Techniques* and **PH 1821** *Applied Multivariate Analysis for Biostatistics*
- **PH 1830** *Categorical Data Analysis*
- **PH 1831** *Survival Analysis*
- **PH 1910** and **PH 1911** *Theory of Biostatistics I and II*
- **PH 1915** *Linear Models I*
- **PH 1950** *Stochastic Processes for Biostatisticians I*
- **PH 1988** *Biostatistics Seminar*
- **PH 1997** *A Teaching and Learning Experience for Doctoral Students in Biostatistics*

Students are also expected to select additional courses including, but not limited to, generalized linear models, statistical methods in correlated outcome data, survey sampling, methodology of clinical trials, distribution-free methods, time series analysis, operations research, experimental design, statistical computing, Bayesian statistics, advanced survival analysis, or Special Topics courses. Students are encouraged to enroll in the weekly biostatistics seminar series (at least one semester is required).

For students with a BA or BS degree directly entering the PhD program, the required courses include all the required courses for the MS program as preparation for the required courses for the PhD program. The eight (8) credit hours for the Intermediate Biostatistics Course series PH 1690 and PH 1700 do not count toward the minimum credit hours for the PhD program or the “direct admission” PhD program. It is expected that most applicants will be sufficiently prepared for advanced courses beyond intermediate biostatistics.

The PhD program requires course work in two minor disciplines or one minor discipline and one breadth area.

At the end of the second year of doctoral study, students must satisfactorily complete a written preliminary examination in biostatistics. The preliminary examination is given once a year in August. 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 conceive and conduct independent research in biostatistics. After completing minor and breadth course requirements, the student will undertake an oral proposal defense, covering both their research proposal and questions on their minor and breadth areas. 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.

All PhD students in Biostatistics are also required to take one epidemiology course (if one is not already covered in the major, minor, or breadth areas).

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

PH 1624 *Introduction to SAS Data Management*
The Faculty in Biostatistics, 3 credits, cd

This course covers reading ASCII files using various format 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*

The Faculty in Biostatistics, 2 credits, cd

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

PH 1690 *Foundations of Biostatistics*

The Faculty in Biostatistics, 4 credits, a, b, cd (always offered face to face and online)

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. This course introduces the development and application of statistical reasoning and methods in addressing, analyzing, and solving problems in public health. Computer applications are included.

PH 1700 *Intermediate Biostatistics*

The Faculty in Biostatistics, 4 credits, a, b, cd

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: PH 1690 or equivalent knowledge/training. PH 1610 is not sufficient.

PH 1745 *Sampling Techniques*

Perez, 3 credits, (periodically offered upon request)

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*

Swartz, 3 credits, a, b

This course in methods of data analysis is intended for graduate students in Biostatistics and MS or PhD students in other disciplines. 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*

The Faculty in Biostatistics, 3 credits, b

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. As in PH 1820, emphasis is placed on case studies, graphics, and proper use and interpretation of statistical software packages using Stata as a model statistical software package.

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

PH 1830 *Categorical Data Analysis*

Yamal, Fujimoto, 3 credits, a, b

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*

Davis, Li, 3 credits, a, b

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*

Moye, 3 credits, a

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. The course is intended primarily for MS and PhD students in Biostatistics and doctoral students minoring in Biostatistics.

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

PH 1840 *Statistical Methods for Handling Missing Data*

Perez, 3 credits, b (even-numbered years)

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. The course is intended primarily for MS and PhD students in Biostatistics and doctoral students minoring in Biostatistics.

Prerequisites: PH 1700 or the consent of instructor

PH 1855 *Distribution-Free Methods*

Lai, 3 credits, b (odd-numbered years)

This 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

PH 1910 *Theory of Biostatistics I*

Chan, 3 credits, a

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. This course is designed primarily for students specializing in Biostatistics.

Prerequisites: Working knowledge of differential and integral calculus

PH 1911 *Theory of Biostatistics II*

Wei, 3 credits, b

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. This course is designed primarily for students specializing in Biostatistics.

Prerequisites: PH 1910 or consent of instructor

PH 1915 *Linear Models I*

DeSantis, 3 credits, a

This 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. This course is intended primarily for students specializing in Biostatistics.

Prerequisites: PH 1911 or consent of instructor

PH 1916 *Generalized Linear Models*

The Faculty in Biostatistics, 3 credits, a (odd-numbered years)

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

PH 1918 *Statistical Methods in Correlated Outcome Data*

Luo, 3 credits, b (even-numbered years)

This 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*

Lai, 3 credits, (periodically offered upon request)

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

PH 1930 *Statistical Computing*

Luo, 3 credits, a

This 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. The course will cover the basic language elements and methods for software development in R. 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. Students will utilize the techniques and software covered in Part 1 to implement the algorithms.

PH 1950 *Stochastic Processes in Biostatistics I*

Chan, 3 credits, b

This 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

PH 1951 *Stochastic Processes in Biostatistics II*

The Faculty in Biostatistics, 3 credits, (periodically offered upon request)

This course is a continuation of PH 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: PH 1950 or consent of instructor

PH 1960 *Time Series Analysis*

Lai, 3 credits, (periodically offered upon request)

This 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

PH 1965 *Bayesian Data Analysis*

Novelo, 3 credits, b (odd-numbered years)

This 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 1980 *Introduction to Genomics and Bioinformatics*

Xiong, Fu, Liu, 3 credits, a

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.

Prerequisites: Calculus, statistics, and consent of instructor

Cross-listed with GSBS GS110032

PH 1982 *Evolution of DNA and Protein Sequences*

Fu, Liu, Bahl, 3 credits, a (odd-numbered years)

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.

Prerequisites: Calculus, statistics, and consent of instructor

Cross-listed with GSBS GS110103

PH 1984 *Population Genetics*

Fu, Xiong, Liu, 3 credits, b

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. Specifically, at the end of the course, students should be able to (1) to understand allele frequency and how it is affected by various evolutionary forces, such as mutation, population division, random genetic drift, inbreeding and natural selection; (2) to understand linkage disequilibrium and dynamics, and be able to apply theory for analyzing linkage disequilibrium pattern in natural populations, such as humans; (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 statistical methods based on coalescent for analyzing DNA samples from natural populations.

Prerequisites: Genetics, statistics, and consent of instructor

Cross-listed with GSBS GS110042

PH 1985 *Data Mining and Statistical Learning*

Yamal, 3 credits, b

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*

Fu, Xiong, Liu, 3 credits, a

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.

Prerequisites: Consent of instructor

Cross-listed with GSBS GS11 1113

PH 1988 *Biostatistics Seminar*

Tilley, 1 credit, a, b

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.

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

The Faculty in Biostatistics, 1 credit, a

This 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 to their role as teaching assistants (TAs) in Biostatistics courses for students choosing Biostatistics as a major or minor; (2) Develop group leadership and teaching skills; and (3) Monitor and improve presentation skills. For this course, doctoral students will serve as a TA in a PhD-level Biostatistics course, and will receive instruction and feedback on their group leadership and teaching skills from faculty. Students meet one (1) hour per week outside the class where they are serving as a TA to discuss the problem-based learning case studies based on examples provided and on their own teaching experiences. The remainder of class time will be spent in the course where the student is serving as TA. This is a required course for all PhD students in Biostatistics.

Prerequisites: Enrolled in a doctoral program in the Department of Biostatistics and concurrently enrolled in TA boot camp before signing up for this course

PH 1998 *Special Topics in Biostatistics*

The Faculty in Biostatistics, a, b, cd, credit hours vary among Special Topics courses

Special Topics provide intensive coverage of biostatistical theory and applications. Topics vary each semester. Previous topics have included:

Advanced Survival Analysis

Applications of Advanced Multivariate Techniques to Genomics Analysis

Data Mining and Methodology

Experimental Design (odd-numbered years)

Large Sample Theory in Biostatistical Inferences

Resampling and Non-parametric Regression (odd-numbered years)

Spatial Statistics (even-numbered years)

PH 1999 *Independent Study in Biostatistics*

The Faculty in Biostatistics, 1-9 credits, a, b, cd

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.

PH 9996 *Capstone Course for MPH Students*

The Faculty in UTHHealth School of Public Health, 3 credits, a, b, cd

The culminating experience capstone course for MPH students requires synthesis, integration, and problem-solving. These activities, in turn, require that students 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. It is preferable that the practicum be completed prior to the Capstone Course, but it may be completed concurrently.

PH 9997 Practicum

The Faculty in Biostatistics, 1-9 credits, a, b, cd

A practicum is determined by the student and advisor, and supervised by a member of the Biostatistics faculty. Only three (3) semester credit hours of practicum will count towards a degree program.

PH 9998 Culminating Experience/Thesis Research

The Faculty in Biostatistics, 1-9 credits, a, b, cd

Culminating experience/thesis research is determined by the student with approval of the student's advisory committee. Only three (3) semester credit hours of culminating experience/thesis research will count towards a degree program.

PH 9999 Dissertation Research

The Faculty in Biostatistics, 1-9 credits, a, b, cd

Dissertation research is determined by the student with approval of the student's advisory committee. Only six (6) semester credit hours of dissertation research will count towards a degree program.

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 offers MPH, MS, DrPH, and PhD degree programs. The EOHS program offers MPH, DrPH, and PhD degrees.

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, DrPH, 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.

The department also offers a minor course of study (nine (9) semester credit hours) for MS, DrPH, and PhD students majoring in other public health disciplines.

For MS students, minor requirements are:

- **PHM 2612** *Epidemiology I* (3 credits)
- Two elective courses in Epidemiology (6 credits) PH 2615 and 2710 are recommended.

For doctoral students, minor requirements are:

- **PH 2615** *Epidemiology II* (3 credits)
- **PH 2710** *Epidemiology III* (3 credits)
- At least one additional course in Epidemiology (**PHD 2711** *Epidemiology IV*, (3 credits) is recommended)

Epidemiology offers strong training in the fundamental research methods and practice of epidemiology.

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 program in Epidemiology is 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. The MPH degree is a minimum of 45 semester credit hours.

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 "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

To obtain a basic understanding of epidemiologic principles and practice in the broader context of public health, full-time students will ordinarily complete the course sequence of four semesters.

In addition to the MPH core courses in Biostatistics; Environmental and Occupational Health Sciences; Health Promotion and Behavioral Sciences; and Management, Policy and Community Health, the following departmental courses are required for an MPH student majoring in Epidemiology:

- **PHM 2612** *Epidemiology I*
- **PH 2615** *Epidemiology II*
- **PH 2710** *Epidemiology III*
- **PHM 5010** *Ethics in Public Health*
- Two elective courses in Epidemiology
- **PH 9997** *Practicum*

Note that **PH 1690** *Foundations of Biostatistics* and **PH 1700** *Intermediate Biostatistics* are prerequisites for **PH 2710** *Epidemiology III*.

Additionally, the MPH degree requires the completion of a formal practicum and a culminating experience. Both involve the application of epidemiological science and theory. The culminating experience focuses on an epidemiological problem, and requires students to synthesize the knowledge gained during coursework, research, and practice, and includes both a written and oral presentation.

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/>.

Doctor of Public Health (DrPH) Degree Program

The DrPH degree in Epidemiology signifies distinguished scholarly and practical accomplishments in the field of Epidemiology. The DrPH program is primarily designed for those who plan careers involving professional practice, teaching, or research. The DrPH program is a minimum of 48 semester credit hours. All students must complete DrPH program requirements within seven (7) years.

Special Entrance Requirements

Applicants to the DrPH program should have a prior MPH degree or equivalent preparation from a regionally accredited institution of higher education. Applicants should also demonstrate outstanding promise for scholarly accomplishment, as well as professional leadership for extending public health practice. In addition to an MPH degree, evidence of promise might include previous or current employment in a public health or health-related agency or service to such agencies, with supporting letters of recommendation documenting and evaluating the applicant's achievements. Applicants may also submit copies of reports, articles, a career goal statement, or other written material believed to reflect such promise by the application deadline. 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 "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 seeking a DrPH degree should anticipate a minimum 3-year program of full-time study. All DrPH students are strongly recommended to complete a breadth in Leadership in addition to a public health minor area.

The following courses are required for DrPH students majoring in Epidemiology:

- **PH 1690** *Foundations of Biostatistics*
- **PH 1700** *Intermediate Biostatistics*
- **PH 1830** *Categorical Data Analysis* AND/OR **PH 1831** *Survival Analysis*
- **PHM 2612** *Epidemiology I*
- **PH 2615** *Epidemiology II*
- **PH 2710** *Epidemiology III*
- **PHD 2711** *Epidemiology IV*

- **PHD 2712** *Experimental Methods in Epidemiology*, OR **PH 1835** *Statistical Methodology in Clinical Trials*
- **PHD 2770** *NIH Proposal Development*, OR **PH 2720** *Epidemiology Proposal Development*
- **PHD 2990** *Epidemiology Seminar*

All students pursuing a DrPH in Epidemiology must pass a preliminary examination (and dissertation proposal defense) for admission to doctoral candidacy. After successful completion of the preliminary examination, students continue to take courses directed at their research interest. They must complete an original research dissertation in an area of epidemiology, which the doctoral candidate will present and defend in a public forum at the school. Students in the doctoral program may assist with the Epidemiology teaching program under the guidance of the faculty.

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

Preliminary Examination

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 exam is given by this department at least once per year. A faculty committee develops and administers the preliminary examination. 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 examination at the end of two semesters of study. The five courses are: PH 2710, PHD 2711, PHD 2712 or PH 1835, PH 1830 or PH 1831, and one elective course in epidemiology. After the examination, the student should take PHD 2770 or PH 2720 and other courses specific to the student's research agenda, including three courses in their declared major and three courses in their declared breadth.

Master of Science (MS) Degree Program

The MS program in Epidemiology 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. The MS degree program is a minimum of 36 semester credit hours.

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 “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

To obtain a basic understanding of epidemiologic principles, concepts, methods, and their applications, full-time students will ordinarily complete the epidemiology course sequence in two (2) years. Students will select one minor area of study in a public health discipline.

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

- **PH 1690** *Foundations of Biostatistics*
- **PH 1700** *Intermediate Biostatistics*
- **PHM 2612** *Epidemiology I*
- **PH 2615** *Epidemiology II*
- **PH 2710** *Epidemiology III*
- **PH 2720** *Epidemiology Proposal Development*
- **PHM 5010** *Ethics in Public Health*
- Two elective courses in Epidemiology

All MS students in Epidemiology are also required to complete one of the following courses in their first year of the program:

- **PHM 3715** *Introduction to Management and Policy Sciences*, OR **PHM 3620** *Principles and Practice of Public Health*, OR **PH 5098** *Special Topics- The History and Culture of Disease and Healing*

Note that **PH 1690** *Foundations of Biostatistics* and **PH 1700** *Intermediate Biostatistics*, are prerequisites for **PH 2710** *Epidemiology III*.

In addition to coursework, the MS in Epidemiology program requires the successful completion of a research thesis that demonstrates an appropriate depth of knowledge in the field. All MS Epidemiology students must give an oral presentation of their thesis defense. Students are required to complete the MS program requirements within five years.

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 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. The PhD degree program is a minimum of 48 semester credit hours. 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 “Application Procedures and Deadline Dates” section for a list of required application materials, and “Admissions Process” section for factors considered in the admission decision.

Direct Admission to the 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

For students with a prior master's degree, at least three (3) years of full-time study are generally needed to complete the degree program. Students with a prior bachelor's degree will typically require four (4) years of full-time study.

Students pursuing a PhD in Epidemiology are required to select one disciplinary minor area of study and one defined breadth area 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:

- **PH 1690** *Foundations of Biostatistics*
- **PH 1700** *Intermediate Biostatistics*
- **PH 1830** *Categorical Data Analysis AND/OR PH 1831* *Survival Analysis*
- **PHM 2612** *Epidemiology I*
- **PH 2615** *Epidemiology II*
- **PH 2710** *Epidemiology III*
- **PHD 2711** *Epidemiology IV*
- **PHD 2712** *Experimental Methods in Epidemiology, OR PH 1835* *Statistical Methodology in Clinical Trials*
- **PHD 2770** *NIH Proposal Development OR PH 2720* *Epidemiology Proposal Development*
- **PHD 2990** *Epidemiology Seminar*
- At least one elective course in Epidemiology

All students pursuing a PhD in Epidemiology must pass a preliminary examination (and dissertation proposal defense) for admission to doctoral candidacy. After successful completion of the preliminary examination, students continue to take courses directed at their research interest. They must complete an original research dissertation in an area of epidemiology, which the doctoral candidate will present and defend in a public forum at the school. Students in the doctoral program may assist with the Epidemiology teaching program under the guidance of the faculty.

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/>.

Preliminary Examination

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. A faculty committee develops and administers the examination. 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 or PH 1835, PH 1830 or PH 1831, and one elective course in epidemiology. After the examination, the student should take PHD 2770 or PH 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 2610 *Fundamentals of Epidemiology*

The Faculty in Epidemiology and Human Genetics, 3 credits, a, b, cd (always offered face-to-face and online)

This is a designated core course. This course introduces students to principles and concepts in epidemiology through lectures, discussions, assigned readings, and exercises. Students are given the opportunity to acquire an understanding of epidemiologic principles and concepts; the vocabulary of epidemiology; methods of epidemiologic investigation; and the design, interpretation, and evaluation of epidemiologic research. The emphasis is on public health practice of epidemiology, and this course serves as the core epidemiology course for most MPH students.

PHM 2612 *Epidemiology I*

Du, Lopez (fall) and Nyitray (spring), 3 credits, a, b

This is a designated core course. This is a core course for students enrolled in the MPH or MS in Epidemiology programs. It introduces the principles and concepts in epidemiology through lectures, discussions, assigned readings, and exercises. Students are given the opportunity to acquire an understanding of epidemiologic principles and concepts; the vocabulary of epidemiology; methods of epidemiologic investigation; and the design, interpretation, and evaluation of epidemiologic research. The key concept of this course is to help students to learn how to think epidemiologically and to apply these epidemiologic concepts and methods to solve public health problems through research.

Prerequisites: Consent of instructor

PH 2615 *Epidemiology II*

Pompeii, Otto (fall) and Selwyn, Gabriel, Wilkinson (spring), 3 credits, a, b

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, that is, how you get it done. 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 PH 1690)

PH 2710 *Epidemiology III*

Symanski (fall), Kelder, Caetano, Nyitray, (spring), and Waller (summer) 3 credits, a, b, cd (alternating summer sessions)

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), PH 1690 and PH 1700 or equivalent

PHD 2711 *Epidemiology IV*

Waller (fall) and Day (spring), 3 credits, a, b

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*

Hwang (fall), Sharma and Piller (spring), 3 credits, a, b

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. A standard text and selected readings concerning specific experimental studies and related topics are used. 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

PH 2720 *Epidemiology Proposal Development*

Mitchell, 3 credits, b

This course covers the structure and content of a student research proposal (thesis and dissertation), scientific writing conventions, strategies for conducting a literature search, critical evaluation and synthesis of epidemiological literature, development of specific aims and research methods, procedures for writing and editing research proposals, and presentation of epidemiologic information. Doctoral students enrolled in the class will also be introduced to the components of NIH grant applications and the NIH grant review process.

This course is intended for MS, PhD, and DrPH students. Doctoral students may substitute this course for PHD 2770.

Prerequisites: PHM 2612I

PH 2725 *Neuroepidemiology*

Fornage, Bressler, 2 credits, a

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*

Hwang and the Faculty in Epidemiology and Human Genetics, 3 credits, b

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 *Genetics and Infectious Diseases*

Qu, Jiang, 3 credits, a

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*

Kohl, 3 credits, a (odd-numbered years)

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*

Morrison, 3 credits, a (online only)

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*

Lopez, Hildebrandt, 3 credits, cd

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*

Jiang, Qu, 3 credits, a (online only)

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*

Day, 2 credits, a

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*

Cooper, 3 credits, cd (online only)

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.

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

Taught simultaneously with PHWD 2760.

PHWD 2760 *Occupational Epidemiology*

Cooper, 3 credits, cd (Online only)

There are approximately 150 million people in the U.S. workforce who are exposed to a wide range of health and safety hazards. Workplace injuries and illnesses exact a large human and economic toll to adult and child workers in the U.S. and worldwide. Many, if not most, of these adverse health outcomes are preventable. This course will describe the types and magnitude of workplace injuries and illnesses, examine the epidemiologic methods used to identify risk factors for these events, and examine 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. PhD students will have additional projects.

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

Taught simultaneously with PHWM 2760.

PH 2765 *Pediatric Epidemiology*

Mitchell, 3 credits, (periodically offered)

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*

Daiger, Hixson and the Faculty in Epidemiology and Human Genetics, 3 credits, a

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. Knowledge of how the NIH works is an important part of academic life in the United States. While there are many other funding sources for public health and medical research, the NIH is the largest, most competitive, and the most prestigious. Developing grant writing skills is essential for academic success in today's competitive environment and shifting federal priorities. In academic life, without grant preparation skills, your chances for promotion and tenure are reduced.

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.

This course is intended for PhD and DrPH students.

Prerequisites: PH 2710

PHW 2775 *Epidemiologic Methods in Racial and Ethnic Disparities*

Salinas, Gonzalez, 3 credits, a (Online only)

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 *Applied Genetic Methods in Public Health*

Morrison, 3 credits, c

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 2782 *Practical Computational Genetics and Bioinformatics*

Liu, Jun, 3 credits, b

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*

Darkoh, 3 credits, b, cd (online only)

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.

PHM 2800 *Tropical Infectious Diseases*

Brown and the Faculty in Epidemiology and Human Genetics, 3 credits, a

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*

Brown and the Faculty in Epidemiology and Human Genetics, 3 credits, b (odd-numbered years)

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*

Piller and the Faculty in Epidemiology and Human Genetics, 3 credits, b (hybrid course)

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*

Hanis, Boerwinkle, and the Faculty in Epidemiology and Human Genetics, 3 credits, a

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*

Hixson, Bressler, Fornage, 3 credits, b

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.

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

Cross-listed with GSBS GS110023

PH 2830 *Clinical Genetics in Epidemiology*

Daiger and the Faculty in Epidemiology and Human Genetics, 3 credits, b

This course teaches the role clinical genetics plays in the practice of epidemiology, and the relationship between epidemiology and medical genetics. (“Clinical genetics” and “medical genetics” are used interchangeably in this context.) 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*

Pompeii, 3 credits, b (online only)

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.

PHWD 2835 *Injury Epidemiology*

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This course provides an 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*

Day, 3 credits, a

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), PH 1690 (or PH 1700 or equivalent), or consent of instructor

PHD 2845 *Nutritional Epidemiology*

Day, 3 credits, a

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), PH 1690 (or PH 1700 or equivalent), or consent of instructor

PHM 2846 *Rapid Assessment Methods in Public Health*
Selwyn, 3 credits, a

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. Action calls for timely research that provides input into the public health core functions of assessment, policy development, and assurance. Students will practice several rapid assessment methods for providing valid and accurate information in the face of impending or occurring need or disaster, and for evaluating the effect of prevention activities and interventions on health outcomes. This course will help students to gain competence with both quantitative sampling methods and with qualitative data gathering methods.

PHD 2846 *Rapid Assessment Methods in Public Health*
Selwyn, 3 credits, a

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. Action calls for timely research that provides input into the public health core functions of assessment, policy development, and assurance. Students will practice several rapid assessment methods for providing valid and accurate information in the face of impending or occurring need or disaster, and for evaluating the effect of prevention activities and interventions on health outcomes. 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*
Rahbar and the Faculty in Epidemiology and Human Genetics, 3 credits, b

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*

Hanis and the Faculty in Epidemiology and Human Genetics, 2 credits, b

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*

Bressler, 1 credit, a, b

In this seminar, students analyze and present individual topics or research.

Prerequisites: Consent of instructor

Cross-listed with GSBS GS110711

PHM 2970 *Foundations of Public Health Genetics*

The Faculty in Epidemiology and Human Genetics, 3 credits, a

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.

PHD 2970 *Foundations of Public Health Genetics*

The Faculty in Epidemiology and Human Genetics, 3 credits, a

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*

The Faculty in Epidemiology and Human Genetics, 1 credit, a, b

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*

The Faculty in Epidemiology and Human Genetics, a, b, cd, credit hours vary among Special Topics courses

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

Case Studies in Gene-Environment Interaction

Molecular Mechanisms of Bacterial Pathogenesis

Disease Detectives: International Epidemic Investigations

Epidemiology and Interventions for Child and Adolescent Health

Epidemiology of Mental Health

Environmental Epidemiology

Modeling Infectious Disease Dynamics

Measurement and Assessment of Physical Activity in Individual and Populations

Seminar in Integrated Public Health Nutrition

Public Health Preparedness and Disaster Response

Seminar in Child Adolescent Health

PH 2999 *Independent Study in Epidemiology*

The Faculty in Epidemiology and Human Genetics, 1-9 credits, a, b, cd

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.

PH 9996 *Capstone Course for MPH Students*

The Faculty in UTHealth School of Public Health, 3 credits, a, b, cd

The culminating experience capstone course for MPH students requires synthesis, integration, and problem-solving. These activities, in turn, require that students 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. It is preferable that the practicum be completed prior to the Capstone Course, but it may be completed concurrently.

PH 9997 *Practicum*

The Faculty in Epidemiology and Human Genetics, 1-9 credits, a, b, cd

A practicum is determined by the student and advisor and supervised by a member of the Epidemiology and Human Genetics faculty. Only three (3) semester credit hours of practicum will count towards a degree program.

PH 9998 *Culminating Experience/Thesis Research*

The Faculty in Epidemiology and Human Genetics, 1-9 credits, a, b, cd

Culminating experience/thesis research is determined by the student with approval of the student's advisory committee. Only three (3) semester credit hours of culminating experience/thesis research will count towards a degree program.

PH 9999 *Dissertation Research*

The Faculty in Epidemiology and Human Genetics, 1-9 credits, a, b, cd

Dissertation research is determined by the student with approval of the student's advisory committee. Only six (6) semester credit hours of dissertation research will count towards a degree program.

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 the EOHS program, 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 "Academic Programs" tab).

The EOHS program offers the MPH and DrPH degrees in Occupational and Environmental Health, and the PhD degree in Environmental Science. The MPH and DrPH degrees focus 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 problems with a focus on research.

The EOHS program also offers a minor course of study (minimum nine (9) semester credit hours) for MS, DrPH, and PhD students majoring in other public health disciplines.

- Courses for the MS minor include:
 - **PHWM 2100** *Foundations of Environmental and Occupational Health Sciences* (required)

- **PHM 2130** *Recognition of Environmental and Occupational Hazards* (recommended)
- **PH 2175** *Toxicology I: Principles of Toxicology* (recommended)
- Courses for the DrPH and PhD minor include:
 - One of the following courses:
 - **PHD 2135** *Risk Analysis: Principles and Practice*, OR **PHD 2190** *Environmental and Occupational Health Policy*
 - One of the following courses:
 - **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*
 - Any other EOHS course, at master's or doctoral level, may be used to fulfill the remaining credit hour obligations

The prerequisite science background for these courses is required to take the minor course of study in EOHS.

Master of Public Health (MPH) Degree Program

The MPH program in Occupational and Environmental Health 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. The MPH degree program is a minimum of 45 semester credit hours.

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 course-work requirements will be considered. Additional requirements apply for certain areas of study, including industrial hygiene and occupational and environmental medicine.

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 an MPH student majoring in Occupational and Environmental Health:

- **PHWM 2100** *Foundations of Environmental and Occupational Health Sciences* (available online only)
- **PHM 2101** *Contemporary Issues in Environmental and Occupational Health*
- **PHM 2130** *Recognition of Environmental and Occupational Hazards*, OR **PHM 2110** *Overview of Environmental Health*, OR **PHWM 2120** *Man's Impact on the Environment*, OR **PH 2245** *Fundamentals of Industrial Hygiene*
- **PH 2175** *Toxicology I: Principles of Toxicology*
- **PH 2205** *Health and Safety Program Management and Leadership*

At least three additional courses are required from the EOHS program offerings (or, by permission and with strong justification, relevant courses from other UTHealth School of Public Health programs). For the three additional EOHS program courses, two of the following epidemiology courses may be selected: **PHWM 2835** *Injury Epidemiology*, **PHWM 2760** *Occupational Epidemiology*, or **PH 2998** *Environmental Epidemiology*. Approved courses will change according to changes in the EOHS doctoral degree planner. The practicum and culminating experience are also required, and should have an environmental or occupational health focus.

Students usually require a minimum of two (2) years of full-time study to complete the MPH degree requirements. The actual scope and length of the program will be determined by the student's advisory committee based on the student's academic objectives and prior experience. Certain curricula require more than 45 credit hours to complete all requirements, e.g., the industrial hygiene curriculum.

All MPH students in EOHS are also required to take **PHM 5010** *Ethics in Public Health*.

For a sample of the course of study for an MPH in Occupational and Environmental Health, 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 program in Occupational and Environmental Health offers interdisciplinary training for students who want to practice at an advanced level or pursue academic careers in public health practice. The DrPH degree program is a minimum of 48 semester credit hours.

Special Entrance Requirements

Applicants to the DrPH program should have a prior MPH degree or equivalent preparation from an accredited institution of higher education. In addition, applicants are expected to have successfully completed coursework in mathematics, chemistry, biological sciences, and environmental health. In exceptional cases, applicants without the required academic background in public health may be accepted on the condition of additional coursework in public health.

Specific prerequisites for admission or makeup requirements (all strongly preferred prior to admission) are courses essentially equivalent in scope and coverage to the following (credits for "M" courses do not apply to the minimum of 48 credits required for the DrPH degree):

- **PHM 2100** *Foundations of EOHS*
- **PHM 2130** *Recognition of Environmental and Occupational Hazards*
- **PH 2175** *Toxicology I: Principles of Toxicology*
- **PH 1700** *Intermediate Biostatistics*
- **PHM 2610** *Fundamentals of Epidemiology*

"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

To be eligible to take the preliminary examination in EOHS, students must meet the following requirements, except in the case of a waiver (waiver process varies by program):

- **PHWD 2106** *Introduction to Doctoral Research Methods in Environmental and Occupational Health Sciences*
- **PHD 2105** *Environmental and Occupational Health Sciences Doctoral Seminar* (this seminar should be taken twice)
- **PHD 2135** *Risk Analysis: Principles and Practice*, OR **PHD 2190** *EOHS Policy*
- **PHWD 2108** *Applied Epidemiological Analyses in Environmental and Occupational Health Sciences*
- **PHWD 2835** *Injury Epidemiology*, OR **PHWD 2760** *Occupational Epidemiology*, OR **PH 2998** *Environmental Epidemiology*

Elective courses: at least six (6) more credit hours of other EOHS doctoral-level courses are required prior to the preliminary examination.

- The list of all EOHS “D” courses in the current catalog shows those eligible for election. Any other EOHS “D” courses that may be modified or created in the future are available in the elective category. EOHS faculty may approve other 'D' courses.
- Two EOHS courses that are designated neither “M” nor “D” may be substituted for “D” courses in the above elective requirement. The list of such courses in the current catalog shows those available for election. Any other such EOHS courses that may be modified or created in the future are eligible in the elective category. EOHS may approve other non-“M,” non-“D” courses.

Two disciplinary minors or a minor and a breadth area must be completed, per UTHealth School of Public Health requirements. All DrPH students are strongly recommended to select a breadth in Leadership. Courses for these may be completed after the preliminary examination, as may other elective courses in EOHS.

Students are expected to carry out original research that constitutes a substantial contribution to public health practice with an emphasis in EOHS. The DrPH practicum is required and should have an environmental or occupational health focus.

All students pursuing a DrPH 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.

All DrPH students in EOHS are also required to take one epidemiology course (if one is not already covered in the major, minor or breadth areas).

For a sample of the course of study for a DrPH in Occupational and Environmental Health, 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 program 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. The PhD degree program is a minimum of 48 semester credit hours.

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.

Specific prerequisites for admission or makeup requirements (all strongly preferred prior to admission) are courses essentially equivalent in scope and coverage to the following (credits for “M” courses do not apply to the minimum of 48 credits required for the PhD degree):

- **PHM 2100** *Foundations of EOHS*
- **PHM 2130** *Recognition of Environmental and Occupational Hazards*
- **PH 2175** *Toxicology I: Principles of Toxicology*
- **PH 1700** *Intermediate Biostatistics*
- **PHM 2610** *Fundamentals of Epidemiology*

“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

To be eligible to take the preliminary examination in EOHS, students must meet the following requirements, except in the case of a waiver (waiver process varies by program):

- **PHWD 2106** *Introduction to Doctoral Research Methods in Environmental and Occupational Health Sciences*
- **PHD 2105** *Environmental and Occupational Health Sciences Doctoral Seminar* (this seminar should be taken twice)
- **PHD 2135** *Risk Analysis: Principles and Practice*, OR **PHD 2190** *EOHS Policy*
- **PHWD 2108** *Applied Epidemiological Analyses in Environmental and Occupational Health Sciences*
- **PHWD 2835** *Injury Epidemiology*, OR **PHWD 2760** *Occupational Epidemiology*, OR **PH 2998** *Environmental Epidemiology*

Elective courses: at least six (6) more credit hours of other EOHS doctoral-level courses are required prior to the preliminary examination.

- The list of all EOHS “D” courses in the current catalog shows those eligible for election. Any other EOHS “D” courses that may be modified or created in the future are available in the elective category. EOHS faculty may approve other “D” courses.
- Two EOHS courses that are designated neither “M” nor “D” may be substituted for “D” courses in the above elective requirement. The list of such courses in the current catalog shows those available for election. Any other such EOHS courses that may be modified or created in the future are eligible in the elective category. EOHS faculty may approve other non-“M,” non-“D” courses.

Either two disciplinary minors or one disciplinary minor and a breadth area must be completed, per UTHealth School of Public Health requirements. Courses for these may be completed after the preliminary examination, as may other elective courses in EOHS.

Students will carry out original research leading to a dissertation with a special emphasis in EOHS. Graduates of the program are prepared to carry out research activities in governmental or private organizations or to pursue academic careers.

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.

All PhD students in EOHS are also required to take one Epidemiology course (if one is not already covered in the major, minor or breadth areas).

For a sample of the course of study for a PhD in EOHS, please see the degree planner 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*
Delclos, 4 credits, a (online)

This one-semester course covers basic concepts in the field as groundwork upon which the remainder of the EOHS curriculum is built. Together with **PHM 2130** *Recognition of Environmental and Occupational Hazards* (or 2110 or 2120 or 2245), **PH 2175** *Toxicology I: Principles of Toxicology*, **PHM 2101** *Contemporary Issues in EOHS*, and **PH 2205** *Health and Safety Program Management and Leadership*, **PHWM 2100** *Foundations of EOHS* 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.

This is a designated core course for MPH students **majoring** in EOHS. Completion of PHWM 2100 alone does not meet the non-major MPH core course requirement in environmental health.

PHM 2101 *Contemporary Issues in Environmental and Occupational Health*
Han, the Faculty in EOHS, 2 credits, b

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.

PHD 2101 *Contemporary Issues in Environmental and Occupational Health*
Han, the Faculty in EOHS, 3 credits, b

This course surveys important current issues in the field of EOHS and policy, with the goal of preparing students to critically assess the study methods and results in 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. Doctoral students will engage in additional evaluation of their and their peers' research sources and methods. 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.

PHD 2105 *Environmental and Occupational Health Sciences Doctoral Seminar*
Gimeno, Delclos, 1 credit, a, b

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*
Gimeno, Delclos, 2 credits, a (online only)

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*
Gimeno, 3 credits, b (online only)

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.

PHM 2110 *Overview of Environmental Health*

Mena, Carson, Han, Chappell, Di Giovanni, Rodriguez, 3 credits, a, b, cd (online)

This course surveys the major areas of environmental health, and provides students with an understanding of hazards in the environment, the effects of environmental agents on health, and various approaches to address major environmental health problems. Areas of emphasis are population dynamics; global environmental health problems; environmentally acquired infectious disease; toxicology; food, air, and water quality; occupational health; radiation; noise; and solid and hazardous waste.

This is a designated core course for MPH students not majoring in EOHS.

PHWM 2120 *Man's Impact on the Environment*

Smith, 3 credits, a, cd (online)

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.

This is a designated core course for MPH students not majoring in EOHS.

PH 2126 *Fundamentals and Applications of GIS*

Zhang, 3 credits, a

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*

Whitehead, Zhang, Mena, 2 credits, a

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

PHM 2135 *Risk Analysis: Principles and Practice*

The Faculty in EOHS, 3 credits, a

This course introduces to risk assessment for environmental and occupational health hazards as currently practiced in the United States. The course will examine the strengths and weaknesses of existing procedures for integrating and interpreting scientific data for the

purpose of making risk management decisions. Assumptions underlying both cancer and non-cancer risk assessment are examined. Compromises that must be made to span the gap between available scientific evidence and decisions about acceptable risk are elucidated. Case studies are used to demonstrate important principles and practices.

Taught simultaneously with PHD 2135.

PHD 2135 *Risk Analysis: Principles and Practice*

The Faculty in EOHS, 3 credits, a

This course acquaints doctoral students with the principles underlying risk assessment and provides them with a working knowledge of the practices by which these principles are implemented, particularly in the United States. Through a combination of lectures, class discussions, and team projects, students will become proficient at evaluating the strengths and weaknesses of contemporary health risk assessments, will be able to compare and contrast traditional risk assessment approaches with application of the precautionary principle, and will know and be able to explain the role of science in risk assessment and risk management decisions.

Taught simultaneously with PHM 2135.

PH 2150 *Air Environment*

Zhang, 3 credits, a

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*

Han, 4 credits, b

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.

Prerequisites: Undergraduate chemistry and mathematics, or consent of instructor

PH 2175 *Toxicology I: Principles of Toxicology*

Smith, 3 credits, a

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*

Smith, 3 credits, b

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

PHM 2190 *Environmental and Occupational Health Policy*

The Faculty in EOHS, 3 credits, b (even-numbered years)

This course provides students with a general survey of environmental and occupational health policy, acquaints them with the public policy process in the United States, introduces them to conceptual frameworks for analyzing public policy alternatives, and instills in them an appreciation of the challenges inherent in making policy decisions. Because public policies aimed at protecting worker and community health form the structure and context for most of the professional activities in the field of environmental health sciences, it is imperative that students gain an appreciation of the complexities involved in formulating, implementing, and evaluating regulatory and non-regulatory policies.

Taught simultaneously with PHD 2190.

PHD 2190 *Environmental and Occupational Health Policy*

The Faculty in EOHS, 3 credits, b (even-numbered years)

This course provides doctoral students with a firm grounding in the basics of policy formulation, implementation, and evaluation within the context of protecting public health from the adverse effects of environmental and occupational hazards. Students learn essential frameworks for analyzing and evaluating policy decisions, use these tools to examine and assess contemporary environmental health policies, and evaluate relative roles played by science, economics, politics, social factors, and legal issues in various policy decisions.

Taught simultaneously with PHM 2190.

PH 2205 *Health and Safety Program Management and Leadership*

Douphrate, 3 credits, b

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*

Di Giovanni, 3 credits, b

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. Topics will be presented from a historical perspective, beginning with the origins of water on earth, followed by early civilizations, the Industrial Revolution, and, finally, the modern era. 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.

Taught simultaneously with PHD 2230.

PHD 2230 *Water Environment*

Di Giovanni, 4 credits, b

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. Topics will be presented from a historical perspective, beginning with the origins of water on earth, followed by early civilizations, the Industrial Revolution, and, finally, the modern era. 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 prepare a paper describing its importance to public health, identify any gaps in current knowledge and policy, and lastly, predict future impacts on environmental and/or public health. Doctoral students will also serve as group discussion leaders for PHM 2230.

Taught simultaneously with PHM 2230.

PH 2241 *Fundamentals of Occupational Safety*

Douphrate, Emery, Whitehead, 3 credits, a (odd-numbered years)

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*

Whitehead, 4 credits, a

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 (through organic chemistry), and mathematics

PH 2246 *Principles of Occupational Ergonomics*

Douphrate, 3 credits, a (even-numbered years)

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. Ergonomics is the scientific study of people at work. The course will review anthropometry, physiological basis of work, occupational musculoskeletal disorders and risk factors, workplace and equipment design, environment (noise, vibration, illumination, and temperature), job analysis, and elements of the ergonomics process to improve job design.

PH 2250 *Occupational Health Controls*

Whitehead, 4 credits, b

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*

Delclos, 4 credits, b

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*

Carson, Whitehead, 3 credits, b

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*

Carson, Delclos, 2 credits, a, b, cd

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. The course is offered every Friday from 9:30 am to 11:30 am (These times may be expanded to accommodate special sessions or laboratory activities).

PH 2280 *Environmental Microbiology*

Chappell and the Faculty in EOHS, 3 credits, a

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*

Rodriguez, 3 credits, a

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. Grades in this “pass/fail” course are determined by attendance and participation (with the short summary as well as class discussion constituting participation). The course assumes a minimum of college biology training but is also aimed at health care providers including physicians, nurses, physician assistants and others.

PHM 2290 *Immunology*

Brown, Chappell, 3 credits, b (even-numbered years)

This course covers the essential concepts of the human immune response and their relevance to disease control and prevention. In the first part of the course, the foundations of the subject of immunology will be outlined. In the second part of the course, 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. Grades are based on two written examinations and a report on the current state of knowledge in an area of basic or applied immunology selected by the student.

Prerequisites: Basic background in biology

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

The Faculty in EOHS, a, b, cd, 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. Previous topics have included:

Infection Control and Biosafety

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

The Faculty in EOHS, 1-9 credits, a, b, cd

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.

PH 9996 *Capstone Course for MPH Students*

The Faculty in UTHealth School of Public Health, 3 credits, a, b, cd

The culminating experience capstone course for MPH students is a class that requires synthesis, integration, and problem-solving. These activities, in turn, require that students 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. It is preferable that the practicum be completed prior to the Capstone Course, but it may be completed concurrently.

PH 9997 *Practicum*

The Faculty in EOHS, 1-9 credits, a, b, cd

A practicum is determined by the student and advisor and supervised by a member of the EOHS faculty. Only three (3) semester credit hours of practicum will count towards a degree program.

PH 9998 *Culminating Experience/Thesis Research*

The Faculty in EOHS, 1-9 credits, a, b, cd

Culminating experience/thesis research is determined by the student with approval of the student's advisory committee. Only three (3) semester credit hours of culminating experience/thesis research will count towards a degree program.

PH 9999 *Dissertation Research*

The Faculty in EOHS, 1-9 credits, a, b, cd

Dissertation research is determined by the student with approval of the student's advisory committee. Only six (6) semester credit hours of dissertation research will count towards a degree program.

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.

The department also offers a minor course of study (nine (9) semester credit hours) for MS, DrPH, and PhD students majoring in other public health disciplines. The requirements for a minor in Behavioral Sciences include three courses from the department of HPBS. Courses should cover primary theory and methods in HPBS and/or program evaluation and intervention development (especially for DrPH students).

The following courses, though not required, are recommended for the minor:

Theory Courses

- **PHD 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs*
- **PHD 1122** *Health Promotion Theory and Methods: A Teaching and Learning Experience for Doctoral Students*
- **PHD 1123** *Health Promotion Theory and Methods II*
- **PHD 1227** *Advanced and Emerging Theories in Health Promotion*

Methods Courses

- **PHM 1118** *Introduction to Qualitative Research Methods*
- **PHD 1121** *Advanced Methods in Program Evaluation*
- **PH 1324** *Applied Discrete Data Analysis using Stata*
- **PHD 1130** *Applied Measurement Theory*
- **PHD 1132** *Latent Variable Models and Factor Analysis*
- **PHD 1420** and **PHD 1421** *Research Design and Analysis in Behavioral Sciences I and II*
- **PHD 1425** *Applied Multivariate Statistics for the Behavioral Sciences*
- **PHD 1430** *Systematic Review, Meta-Analysis, and Evidence-Based Public Health*

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 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. The MPH degree program is a minimum of 45 semester credit hours.

Special Entrance Requirements

Applicants to the MPH program should have an earned bachelor's degree. Preferred applicants are those who have completed some coursework in the social or behavioral sciences and/or health promotion, as well as those who have work or volunteer experience related to public health or behavioral sciences in the community or other settings.

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 departmental 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:

- **PHM 1111** *Health Promotion Theory and Methods I*
- **PHM 1112** *Health Promotion Theory and Methods II*
- **PHM 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)*
- **PHM 1120** *Introduction to Program Evaluation*
- **PHM 1433** *Research Seminar in Health Promotion and Behavioral Sciences* (at least one semester)

Additional coursework is expected in research methods, ethics in research and public health, and social and behavioral science content courses. A practicum and culminating experience are also required.

All MPH students in HPBS are also required to take **PHM 5010** *Ethics in Public Health*.

For a sample of the course of study for an 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 degree in Health Promotion/Health Education 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 practicum and dissertation count toward the minimum of 48 semester credit hours); a *recommended* breadth in Leadership; and one minor area of study in Epidemiology; Biostatistics; Environmental and Occupational Health; or Management, Policy, and Community Health.

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

Student will complete a course of study focused on the social and behavioral aspects of public health and the development and evaluation of health promotion interventions.

The following departmental 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:

- **PHD 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)*
- **PHD 1122** *Health Promotion Theory and Methods: A Teaching and Learning Experience for Doctoral Students*
- **PHD 1123** *Health Promotion Theory and Methods II—Doctoral Level*
- **PHD 1420** and **PHD 1421** *Research Design and Analysis in Behavioral Sciences I and II*
- **PHD 1434** *Research Seminar in Health Promotion and Behavioral Sciences*
- The following courses are **strongly recommended**:
 - **PHD 1118** *Introduction to Qualitative Research Methods*
 - **PHD 1227** *Advanced and Emerging Theories for Health Promotion*
 - **PHD 1435** *Health Promotion/Behavioral Sciences Doctoral/Post-doctoral Research Seminar*

All DrPH students in HPBS are strongly recommended to select a breadth in Leadership. They are also required to take at least one epidemiology course (e.g., PHM 2610 or 2612, if one is not already covered in the minor or breadth areas).

Additional coursework is expected in research methods, ethics in research and public health, and social and behavioral science content courses.

The course of study must be approved by the academic advisor.

DrPH students in HPBS must pass the preliminary examination after approximately 18-27 hours of coursework (one year (1) of full-time study). Prior to taking the preliminary examination, DrPH students must take the following courses: PHD 1122, PHD 1123, PHD 1420,

PHD 1421, PHD 1434, and PHM 2610 or PHM 2612. PHM 1120 (if the student has not had a previous course in program evaluation) and PHD 1227 are strongly recommended.

All students pursuing a DrPH 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 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 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 practicum, thesis, or dissertation count toward the minimum of 48 semester credit hours); a *recommended* breadth in Research Methods; and one minor area of study in Epidemiology; Biostatistics; Environmental and Occupational Health; or Management, Policy and Community Health.

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 "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 departmental courses are required, except in the case of a waiver (waiver process varies by program), for a PhD student majoring in Behavioral Sciences:

- **PHD 1113** *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)*
- **PHD 1118** *Introduction to Qualitative Research Methods*
- **PHD 1122** *Health Promotion Theory and Methods: A Teaching and Learning Experience for Doctoral Students*
- **PHD 1227** *Advanced and Emerging Theories for Health Promotion*

- **PHD 1420** and **PHD 1421** *Research Design and Analysis in Behavioral Sciences I and II*
- **PHD 1434** *Research Seminar in Health Promotion and Behavioral Sciences*
- The following courses are strongly recommended:
 - **PHD 1130** *Applied Measurement Theory*
 - **PHD 1435** *Health Promotion/Behavioral Sciences Doctoral/Post-doctoral Research Seminar*

All PhD students in HPBS are strongly recommended to select a breadth in Research Methods. They are also required to take one epidemiology course (e.g., PHM 2610 or 2612, if one is not already covered in the minor or breadth areas).

Additional coursework is expected in research methods, ethics in research and public health, and social and behavioral science content courses.

The course of study must be approved by the academic advisor.

PhD students in Behavioral Sciences must pass the preliminary examination after approximately 18-27 hours of coursework (one (1) year of full-time study). Prior to taking the preliminary examination, PhD students must take the following courses: PHD 1122, PHD 1227, PHD 1420, PHD 1421, PHD 1434, and PHM 2610 or PHM 2612. PHM 1120 (if the student has not had a previous course in program evaluation) and PHD 1123 are strongly recommended.

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 *Social and Behavioral Aspects of Community Health*

Taylor, Fernandez-Esquer, McAlister, Shegog, Brown, Durand, Roncancio, Allicock, 3 credits, a, b, c (always offered face-to-face and online)

This course focuses on health problems and issues and public health methods that have a major social or behavioral component. It is intended for the student with little background in the behavioral sciences. As a core course, this is an overview. The course will cover the major social and behavioral science theories and models used in health promotion and disease prevention, covering many aspects of the behavioral sciences, including individual, community, organizational, and social impacts on health. It will also cover social inequalities and related disparities in health status related to race, social class, and gender; the critical intersection between social and behavioral risk factors; and the development and implementation of public health interventions. The problems considered in this course will vary each year, but include topics with social and behavioral risks.

There are no prerequisites for this course.

PHM 1110 is the core course for non-HPBS majors (Non-majors in campuses other than Houston may use PHM 1111, if desired.)

PHM 1111 *Health Promotion Theory and Methods I*

Hoelscher, Reininger, Shegog, Byrd-Williams, 3 credits, a, b

This course introduces students to the application of selected behavioral science theories and concepts in health education and health promotion programs directed toward individuals and groups. Concepts emphasized are drawn from the Health Belief Model, the Theory of Reasoned Action, Trans-Theoretical Model, and Social Cognitive Theory, with some attention to numerous additional theories and perspectives. Teaching-learning techniques include lecture, demonstration, and problem-based learning case studies. At a campus other than Houston, PHM 1111 can take the place of PHM 1110 as the core course for non-HPBS majors.

PHM 1111 and PHM 1112 are the required core courses for all HPBS majors. These courses must both be taken, but can be taken in any order.

PHM 1112 *Health Promotion Theory and Methods II*

Reininger, Evans, Brown, 3 credits, b, c

This course introduces students to the application of health education and health promotion intervention theory and methods directed toward change in organizations, communities, and governments. Topics include organizational change, mass media, community organizations, diffusion of innovations, community development, social action, and political action. Students are provided opportunities to demonstrate knowledge and gain experience in applying theory, in designing interventions, and in developing programs of intervention to affect programs, policies, and environmental conditions.

PHM 1111 and PHM 1112 are the required core courses for all HPBS majors. These courses must both be taken, but can be taken in any order.

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

Fernandez, Markham, Springer, Valerio, 4 credits, a, b

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. 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.

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

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

Fernandez, Markham, Springer, Valerio, 4 credits, a, b

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. In addition to the class project of choosing a health problem and developing an intervention plan, 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. Furthermore, doctoral students will present their projects to the class. 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.

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

PHM 1116 *Advanced Methods for Planning and Implementing Health Promotion Programs (Intervention Mapping)*

Fernandez, Markham, Springer, Valerio, 2 credits, b, c – intensive 1-week format course

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. 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.

Prerequisites: PH1690, PHM 2610, and PHM 1111. PHM 1116 is an intensive 1-week format course. See “Just in Time Courses” section for more information on these types of courses.

PHD 1116 *Advanced Methods for Planning and Implementing Health Programs (Intervention Mapping)*

Fernandez, Markham, Springer, Valerio, 2 credits, b, c – intensive 1-week format course

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. In addition to the class project of choosing a health problem and developing an intervention plan, 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. Furthermore, doctoral students will present their projects to the class. 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.

Prerequisites: PH 1700, PHM 2610, and PHM 1111 or PHD 1122. PHD 1116 is an intensive 1-week format course. See “Just in Time Courses” section for more information on these types of courses.

PHM 1118 *Introduction to Qualitative Research Methods*

McCurdy, 4 credits, a

This three-part course familiarizes students who have little or no experience in conducting qualitative research with the perspectives, methods, and techniques of its practitioners. 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 narrative or 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 conduct of fieldwork: students work in small groups or independently to carry out a field-based research project. Part III covers qualitative analysis and presents the students with the opportunity to learn preliminary coding and axial coding techniques. Project and methodological practice reports, based on the fieldwork experience, are required.

Taught simultaneously with PHD 1118

PHD 1118 *Introduction to Qualitative Research Methods*

McCurdy, 4 credits, a

This three-part course familiarizes students who have little or no experience in conducting qualitative research with the perspectives, methods, and techniques of its practitioners. 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.

Taught simultaneously with PHM 1118

PH 1119 *Qualitative Analysis*

McCurdy, 3 credits, b – intensive 1-week format course

This course provides the basic tools for analyzing ethnographic and other forms of qualitative data. Different analytical approaches are explored and examined. Students will explore the use of different types of analysis that are appropriate to the data project's overarching theoretical approach and the topical focus of the study from which it was produced. Students will learn the basics of ATLAS.ti, a software program for coding textual and visual data. Preferably, students will analyze data collected in PH 1118 or in another project conducted after that course is taken. The final paper will be the write-up of their results. Other coursework includes lectures, instruction and work with ATLAS.ti, discussions, and intensive group work on other data students will analyze as part of a team.

Prerequisites: PH 1118 or consent of instructor

PHM 1120 *Introduction to Program Evaluation*

Peskin, Savas, Hernandez, Addy, Cuccaro, 4 credits, a, (online), b (hybrid)

This course introduces students to the theory and application of program evaluation, emphasizing a range of evaluation goals and designs. Online lectures and in-class exercises, small group and whole class discussions focus on practical tools for conducting field evaluations that are focused 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 of study findings. Students will use community-based programs as the basis for their work to enhance the “real world” experience.

Prerequisites: PH 1690 or PH 1700, PHM 2610, PHM 1110 or PHM 1111

PHD 1121 *Advanced Methods in Program Evaluation*

Diamond, 4 credits, a (hybrid ITV-online) (odd-numbered years only)

This course is designed for students who have completed a basic program evaluation course and have statistical training through multiple regression and beyond. The course will combine in-class lecture, hands-on practice, Internet resources, and text materials to expose students to a wide range of methods that have been shown to be useful in outcome and impact evaluations. The emphasis will be on understanding and application. The course will first focus attention on some of the Structural Aspects of conducting a Program Evaluation, such as dealing with multiple program sites, working with external evaluators, developing efficient and accurate data structure and coding schemes, and strategies for handling missing data including missing by design methods. 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. Finally, the course will focus on Statistical Methods for Outcome Analysis that can enhance the internal validity of an evaluation and often compensate for a lack of randomization. In this section, students will cover several regression-based methods, such as propensity score matching, regression discontinuity, the assessment of mediation and moderation, time series analysis, the use of instrumental variables, and double differencing. Students will be expected to make good use of the wide array of resources that are available online; class time will be used primarily for the discussion of case examples and spending time with “hands-on” exercises that will provide an opportunity to actually conduct specific analyses and present findings.

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 Theory and Methods: A Teaching and Learning Experience for Doctoral Students*

Wilkerson, 3 credits, a

This course provides doctoral students with an in-depth overview of the application of selected behavioral science theories and concepts used in health education and health promotion programs directed toward individuals and groups. The goals for this class are to provide students opportunities to: (1) apply behavioral science theories and models to the development of

interventions for health problems; (2) develop group leadership and teaching skills; and (3) monitor and improve scientific writing skills. For this class, doctoral students participate in PHM 1111 as problem-based learning group leaders. In this role, they receive instruction and feedback on their group leadership and teaching skills. They meet once per week outside the PHM 1111 class—in PHW 1122—to discuss their experiences as problem-based learning leaders, learn group facilitation and teaching skills, and practice applying facilitation and teaching skills to the teaching of behavioral science theories in health promotion. Students are responsible for learning the material covered in PHM 1111; they will demonstrate mastery of this content through a mid-term and final exam and by grading the article critiques of master-level students in their problem-based learning groups. Students will be responsible for additional readings and assignments in PHW 1122. This course is beneficial for PhD and DrPH students whose long-term goal includes employment in academia or practice. In academia, members of the faculty are usually expected to teach students, and in practice, advanced practitioners are expected to deliver high-level presentations and facilitate both community and employee learning opportunities.

Prerequisites: Enrolled in a doctoral program in HPBS

PHD 1123 *Health Promotion Theory and Methods II*
McAlister, 3 credits, b

This required course for DrPH students in Health Promotion will guide them in the preparation of an NIH R21 grant proposal to address health disparities using Community Based Participatory Research (CBPR) methods and health behavior theories and models relevant to a significant topic or problem selected by the student. Students will also involve themselves in public health advocacy activities at the local and state or national level and write reports of these experiences. The course will cover advocacy skills, community assessment, coalition building, choosing community partners, ethical issues of community work and methodological issues of CBPR, as well as evidence-based methods for promoting social and behavioral change that can be applied at multiple levels of the ecological model. See PHD 1122 for required prerequisite material on health behavior theories and models.

Prerequisites: PHD 1122, and PHD 1420

PHD 1130 *Applied Measurement Theory*
Vandewater, 3 credits, a

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 (including principle components analysis, exploratory factor analysis, and confirmatory factor analysis); 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. The course format is a combination of lectures, class discussions, computer labs, and assignments.

Prerequisites: PH 1700 or equivalent

PHD 1132 *Latent Variable Models and Factor Analysis*
Diamond, 3 credits, a

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. Students will gain experience testing both measurement and structural models using manifest and latent variables with single- and multiple-group samples. 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. Students will gain experience using specialized software program(s) developed to assess these models through structured exercises as well as by conducting a small replication project of their choice. The course format is a combination of lectures, class discussions, computer labs, and assignments.

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

PHD 1227 *Advanced and Emerging Theories for Health Promotion*
Fernandez-Esquer, 3 credits, b

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 and social science theories of strategic importance to health behavior research. This course complements PHD 1420 and PHD 1421, as well as elaborates and expands on critical issues presented in PHM 1110, PHM 1111, and PHM 1112, with an emphasis on understanding the role of theory in behavioral research.

Prerequisites: PHM 1110 or PHM 1111 and PHM 1112 (or equivalent), PH 1700. This course is for advanced master's or doctoral students with a background in the behavioral sciences.

PHM 1229 *Medical Nutrition Therapy Simulation Lab*
Moore, Piga-Plunkett, 2 credits, a

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.

This course is required for students enrolled in the Dietetic Internship Program.

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*
Moore, Piga-Plunkett, 4 credits, a

This advanced course focuses on the assessment and nutritional management of persons with conditions requiring medical nutrition therapy in general medicine (diabetes, cardiovascular, gastrointestinal) and critical care (surgery, renal, oncology, enteral, and parenteral nutrition). Specialized nutritional needs and principles of clinical management are covered. Grades are based on competency examinations, case studies, and presentations.

Prerequisites: Consent of instructor

PHM 1232 *Public Health Nutrition Practice*

Hoelscher, Evans, 3 credits, b

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 problems, needs, and resources; evaluation of program effects; nutrition policy; nutrition communications; 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*

Moore, Piga-Plunkett, 2 credits, b

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. 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: Open only to dietetic interns concurrently enrolled in Public Health Practicum: Dietetic Internship Supervised Practice Rotation.

PH 1236 *Issues in Aging*

Burnett, 3 credits, b (even-numbered years)

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*

Ranjit, Hoelscher, 1 credit, a

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*

Markham, Peskin, Cuccaro, Emery, 3 credits, b

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*

Cuccaro, 3 credits, a (even-numbered years)

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*

The Faculty in Health Promotion and Behavioral Sciences, 3 credits, (periodically offered)

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*

Wilkerson, 3 credits, a (odd-numbered years)

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*

McAlister, 3 credits, a

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

PHD 1320 *Ethics in Public Health*

Spike, 2 credits, a, b

This course provides a systematic overview of major ethical issues pertaining to health care, delivery, health promotion, disease prevention, and health policy from a public health perspective. The course will include a survey of ethical issues in public health as well as important ethical issues in health care to which public health can contribute. Readings will include the APHA “Ethics and Public Health: A Model Curriculum,” case studies, and some other brief but seminal works. Doctoral students will participate in teaching responsibilities for small groups with the master’s students. Mentors/facilitators will help master’s students recognize the primary features of an ethical problem in public health; become familiar with the language and discourse of public health ethics; recognize and analyze the social and cultural dimensions of ethical dilemmas in public health; and formulate a process for preventing and/or resolving ethical conflicts.

Prerequisites: Prior approval of instructor is required, and evidence of teaching skills will be a factor considered

PH 1321 *Social Networks and Health*

Fujimoto, Jones, 3 credits, a

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: PH 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*
Fujimoto, 3 credits, b

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 13 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*
Fernandez-Esquer, 3 credits, b (even-numbered years)

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: PH1110 or PH1111 and/or background in the social or behavioral sciences

PH 1410 *Addiction and Society*
McCurdy, 3 credits, a, (even-numbered years)

This course introduces different theoretical models which inform cultural representations, treatment and policy decisions of drug use and addiction. Global drug use is ubiquitous and leads to significant personal, familial, socioeconomic and political consequences. Students will critique these models and explore the ways that they inform how different groups in disparate societies imagine what it means to be addicted, how notions of addiction and addict are constructed in used in particular historical moments and places. Students will examine the intersecting relationships between the socioeconomic and political context, the particular drug using population, and issues related to ideas about health, criminality, deviance, and authorities' perceived needs for social control. Students will also learn about controversies surrounding current treatment models at both the individual and policy levels and harm reduction efforts campaigns.

PHD 1420 *Research Design and Analysis in Behavioral Sciences I*
Burnett, Ranjit, 4 credits, a

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 statistical 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 *Research Design and Analysis in Behavioral Sciences II*
Diamond, 4 credits, b

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*
McCurdy, 3 credits, a (odd-numbered years)

This course examines social justice and broad social, cultural, and economic inequalities in public health. It explores local and global controversies about health disparities and examines strategies to address them including community mobilization, coalition building, community-based participatory research, and community-level advocacy. This reading seminar covers topics ranging from social capital, globalization, and the political economy, and how they are related to emerging concerns about chronic and infectious diseases and addiction. Students will also learn about the context in which past and present research strategies, policy decisions, and prevention programs influenced socioeconomic and political systems and community health outcomes.

PHD 1425 *Applied Multivariate Methods for the Behavioral Sciences*
Vandewater, 3 credits, b

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, discriminant 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 1426 *Methods for the Analysis of Change: Applied Longitudinal Analysis*

The Faculty in Biostatistics, 3 credits, b (even-numbered years)

This course is designed for students who are interested in answering questions related to change over time. Topics will include longitudinal outcome analysis, growth curve analysis, latent transition analysis, and other procedures that are designed to answer questions related to change. 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 the elements of research design and have completed statistical classes that covered both univariate and multivariate methods.

Prerequisite: PH 1700 or PH 1421

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

Mullen, Vonville, DeSantis, 3 credits, a

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*

Mullen, Vonville, DeSantis, 2 credits, b (odd-numbered years), c (even-numbered years) – intensive 6-week format course (hybrid)

This 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 culminating experience or dissertation.

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

PHD 1431 is an intensive 6-week format course. See “Just in Time Courses” section for more information on these types of courses.

PHM 1433 *Research Seminar in Health Promotion and Behavioral Sciences*

Vernon, Springer, Byrd-Williams, 1 credit, a, b

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 1434 *Research Seminar in Health Promotion and Behavioral Sciences for Doctoral Students*

Vernon, Springer, Byrd-Williams, 2 credits, a, b

This course builds on the first hour of the research seminar (PHM 1433) in HPBS. Students will discuss and critique readings related to the seminar topic. Through this experience students are expected to develop skills in critical thinking and an ability to critique the literature in HPBS.

Prerequisites: Enrolled simultaneously in PHM 1433

PHD 1435 *Health Promotion/Behavioral Sciences Doctoral/Post-doctoral Research Seminar*
Mullen, Vernon, Peskin, Tiro, 2 credits a, b, cd

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

The Faculty from McGovern Medical School participate in this course.

PH 1498 *Special Topics in Health Promotion and Behavioral Sciences*

The Faculty in HPBS, a, b, cd, credit hours vary among Special Topics courses

Special Topics vary each semester and provide in-depth study of HPBS faculty research. Previous topics have included:

Child and Adolescent Health Promotion Practice and Research Seminar
Community Assessment Principles, Methods, and Technologies (Cross-listed with PH 3998)
Systems Thinking in Public Health
Food Environment and Policy

PH 1499 *Independent Study in Health Promotion and Behavioral Sciences*

The Faculty in HPBS, 1-9 credits, a, b, cd

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.

PH 9996 *Capstone Course for MPH Students*

The Faculty in UTHHealth School of Public Health, 3 credits, a, b, cd

The culminating experience capstone course for MPH students is a class that requires synthesis, integration, and problem-solving. These activities, in turn, require that students 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. It is preferable that the practicum be completed prior to the Capstone Course, but it may be completed concurrently.

PH 9997 *Practicum*

The Faculty in HPBS, 1-9 credits, a, b, cd

A practicum is determined by the student and advisor, and supervised by a member of the HPBS faculty. Only three (3) semester credit hours of practicum will count towards a degree program.

PH 9998 *Culminating Experience/Thesis Research*

The Faculty in HPBS, 1-9 credits, a, b, cd

Culminating experience/thesis research is determined by the student with approval of the student's advisory committee. Only three (3) semester credit hours of culminating experience/thesis research will count towards a degree program.

PH 9999 *Dissertation Research*

The Faculty in HPBS, 1-9 credits, a, b, cd

Dissertation research is determined by the student with approval of the student's advisory committee. Only six (6) semester credit hours of dissertation research will count towards a degree program.

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.

The department offers the MPH and DrPH degrees in three areas: Community Health Practice (MPH and DrPH), Healthcare Management (MPH only), and Health Services Organization (MPH only). The PhD degree is offered in Management and Policy Sciences with tracks in two areas: Health Economics/Health Services Research and Healthcare Management/Health Policy.

The department also offers a minor course of study (nine (9) semester credit hours) for MS, DrPH, and PhD students majoring in other public health disciplines. Students may choose one of the following areas:

- Health Economics/Health Services Research
- Health Policy
- Healthcare Management
- Community Health Practice

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

The MPH degree in Community Health Practice 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.

The MPH degree in Health Services Organization 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.

The MPH degree in Healthcare Management 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.

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 “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 MPH degree program is a minimum of 45 semester credit hours. All MPH students are required to complete the MPH core public health discipline requirements, practicum and culminating experience (see MPH requirements, above). In addition, all MPH students in MPACH are required to take **PHM 5010 Ethics in Public Health**. The specific departmental requirements for each MPH major within MPACH are the following:

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

Major Courses (12 credit hours):

- **PHM 3630** *Health Program Planning, Implementation, and Evaluation*
- **PH 3998** *Community Assessment Concepts, Methods, and Technologies*
- **PHM 3620** *Principles and Practices of Public Health*
- **PHM 3922** *Economic and Social Determinants of Health*

Ten (10) elective credit hours in Community Health Practice (at least 3 courses) from the following:

- **PHM 1232** *Public Health Nutrition Practice*
- **PH 1250** *Current Methods for the Prevention of Sexually Transmitted Infections*
- **PH 1498** *Adolescent Sexual Health*
- **PH 1498** *Global and Local Aspects of Human Trafficking*
- **PHWM 2835** *Injury Epidemiology*
- **PH 1350** *Ethnicity, Race, Class & Gender: A Multicultural Public Health Perspective*
- **PH 1118** *Introduction to Qualitative Research Methods*
- **PH 1119** *Qualitative Analysis*
- **PHD 1430** *Systematic Review Meta-Analysis, and Evidence-based Public Health*
- **PH 3998** *Geographic Information Systems Science*
- **PH 2998** *Rapid Assessment Methods*
- **PH 3998** *Demography and Public Health*
- **PH 3998** *Thinking for Public Health*
- **PH 3818** *Texas Health Policy: Emerging Issues and New Approaches*

- **PH 3825** *Public Health Law*

Other courses may be approved on an individual basis by the Community Health Practice curriculum coordinator.

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

- **PH 3920** *Health Services Delivery and Performance*
- **PHM 3910** *Health Economics*
- **PH 3915** *Methods for Economic Evaluation of Health Programs*
- **PH 3940** *Healthcare Outcomes and Quality Research* OR **PHM 3746** *Evaluation and Improvement of Healthcare Quality* OR **PH 3998** *Quality, Cost and Value Evaluation in Healthcare*
- **PH 3815** *Health Policy Analysis* OR **PHD 3930** *Econometrics in Public Health*
- **PHM 3810** *Health Policy in the United States* OR **PH 3818** *Texas Health Policy*
- **PHD 3930** *Econometrics in Public Health* OR **PHD 3931** *Advanced Econometrics* OR **PH 3815** *Health Policy Analysis* OR **PH 3738** *Legal Issues in Healthcare* OR **PH 3998** *Accounting for Healthcare Management* OR **PH 3736** *U.S. Healthcare Payment Systems and Policy* OR **PHM 3720** *Healthcare Finance*
- One MPACH elective course (at least 1 credit hour)

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

- **PHM 3744** *Organizational Behavior and Human Resource Management in Health Services Organizations* or **PH 5200** *Foundations in Leadership in Public Health*
- **PHM 3998** *Accounting for Healthcare Management*
- **PH 3747** *Healthcare Operations Management*
- **PH 3736** *U.S. Healthcare Payment Systems and Policy*
- **PH 3738** *Legal Issues in Healthcare*
- **PHM 3746** *Evaluation and Improvement of Healthcare Quality* or **PH 3998** *Quality, Cost and Value Evaluation in Healthcare*
- **PH 3735** *Healthcare Strategic Management*
- **PHM 3720** *Healthcare Finance*

The practicum and culminating experience should have a healthcare management or population health management focus.

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/>.

Doctor of Public Health (DrPH) Degree Program

The DrPH program in the Department of MPACH offers interdisciplinary training for students who want to practice at an advanced level or pursue academic careers in community health practice. The DrPH degree program is a minimum of 48 semester credit hours.

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 “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 DrPH degree should anticipate a minimum 3-year course of study. Before advancing to doctoral candidacy, all DrPH students in MPACH are required to pass a preliminary examination covering material contained in at least six designated courses (at least 18 credit hours) in their major.

All DrPH students in MPACH are also required to take one epidemiology course (if one is not already covered in the major, minor, or breadth areas).

DrPH, Community Health Practice

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 the preliminary examination:

- **PH 2615** *Epidemiology II*
- **PH 1700** *Intermediate Biostatistics*
- **PHD 1113** *Advanced Methods for Planning and Implementing Health Programs (Intervention Mapping)*
- **PH 3800** *Working with Diverse Communities*
- **PHD 3998** *CHP Core I*
- **PHD 3998** *CHP Core II: Proposal Development*

After the preliminary examination:

- **PHD 3830** *Ethics and Policy* or **PHD 1320** *Ethics in Public Health*
- **PHD 3998** *CHP Core III: Implementation and Analysis* (Completion of CHP CORE III can serve as practicum)
- **PH 9997** *Practicum* (or an elective course if CHP Core III served as practicum)
- **PH 9999** *Dissertation Research* (at least 1 credit hour)

In addition to these major courses, DrPH candidates are required to complete two minors or a minor and a breadth area of study. DrPH students in Community Health Practice are strongly recommended to select a breadth in Leadership or Methods.

The breadth in Leadership should include 9 credit hours from the following courses (or others as defined by the student’s committee):

- **PH 5200** *Foundations of Leadership in Public Health*
- **PH 3815** *Health Policy Analysis*
- **PH 3825** *Public Health Law*

- **PHD 3830** *Ethics and Policy*
- **PHD 3946** *Strategy, Governance, and Leadership*
- **PHD 3950** *Advanced Leadership Studies in Public Health*
- **PHD 5210** *Selected Readings in Leadership Studies*
- **PH 5220** *Gender and Leadership*

The breadth in Methods should include 9 credit hours from the following courses (or others as defined by the student's committee):

- **PH 2710** *Epidemiology III*
- **PHD 2711** *Epidemiology IV*
- **PH 3998** *Demography for Public Health*
- **PH 2998** *Applied Epidemiology*
- **PH 1820** *Regression Techniques*
- **PH 1119** *Qualitative Analysis*
- **PH 3998** *Geographic Information Systems Science*

Substitutions in either recommended minor may be made with approval of the student's committee.

All students pursuing a 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.

The practicum and dissertation research should have a Community Health Practice focus.

DrPH, Health Services Organization. *Program not accepting students as of 4/3/13.*

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

Before the preliminary examination:

- **PH 3815** *Health Policy Analysis*
- **PHD 3910** *Health Economics*
- **PHD 3922** *Economic and Social Determinants of Health*
- **PHD 3926** *Health Survey Research Design*
- **PHD 3930** *Econometrics in Public Health*
- **PHD 3945** *Advanced Health Services Research Methods*

After the preliminary examination:

- **PHD 3743** *Organization and Management Theory*
- **PHD 3970** *Doctoral Dissertation proposal development in Management, Policy, and Community Health*
- **PH 9999** *Dissertation Research* (at least 1 credit hour)

All students pursuing a PhD or DrPH in Health Services Organization 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.

The practicum and dissertation research should have a health services organization focus.

For a sample of the course of study for a DrPH in MPACH in any one of these majors, 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 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. The PhD degree program is a minimum of 48 semester credit hours.

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. Preferred applicants are those with backgrounds in more than one relevant subject. Also, applicants must have an advanced knowledge of quantitative methods; preferred applicants with strong math and/or statistics backgrounds.

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

All PhD students must choose a major area of study, one minor area of study and a second minor area or a public health breadth area. One minor area of study may come from one of the two designated tracks or from another public health discipline, while the second minor area or public health breadth area must come from a public health discipline outside the Department of MPACH.

Before advancing to doctoral candidacy, all PhD students in MPACH are required to pass a preliminary examination covering material contained in at least six designated courses (at least 18 credit hours) in their major.

All PhD students in MPACH are also required to take at least one epidemiology course (if one is not already covered in the major, minor, or breadth areas).

PhD, Health Economics/Health Services Research. 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 the preliminary examination:

- **PH 3915** *Methods for Economic Evaluation of Health Programs*
- **PHD 3930** *Econometrics in Public Health*
- **PHD 3931** *Advanced Econometrics*
- **PHD 3910** *Health Economics*
- **PH 3940** *Healthcare Outcomes and Quality Research*
- **PH 3920** *Health Services Delivery and Performance*

After the preliminary examination:

Health Economics Track:

- **PHD 3935** *Advanced Health Economics*
- One of the following:
 - **PHD 3945** *Advanced Health Services Research Methods*
 - **PHD 3926** *Health Survey Research Design*
 - **PHD 3957** *Topics in Health Economics*
 - **PHD 3812** *Comparative Healthcare Systems: Policy Challenges and Economic Perspectives*
 - **PH 3998** *Decision Analysis*

Health Services Research Track:

- **PHD 3945** *Advanced Health Services Research Methods*
- One of the following:
 - **PHD 3935** *Advanced Health Economics*
 - **PHD 3926** *Health Survey Research Design*
 - **PHD 3957** *Topics in Health Economics*
 - **PHD 3812** *Comparative Healthcare Systems: Policy Challenges and Economic Perspectives*
 - **PH 3998** *Decision Analysis*

PhD, Healthcare Management/Health Policy. 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/Health Policy:

Before the preliminary examination:

- **PHD 3846** *Quality Management and Improvement in Healthcare*
- **PHD 3721** *Healthcare Finance*
- **PHD 3731** *Healthcare Management and Policy Research*
- **PHD 3930** *Econometrics in Public Health*
- **PHD 3810** *Health Policy in the United States*
- **PH 3815** *Health Policy Analysis*

After the preliminary examination students will select the Healthcare Management or Health Policy track:

Healthcare Management Track:

Select two courses (6 hours) from the following:

- **PH 3738** *Legal Issues in Healthcare* OR **PH 3747** *Healthcare Operations Management*
- **PHD 3998** *Operations, Technology & Decision Management*
- **PH 3736** *U.S. Healthcare Payment Systems and Policy*
- **PHD 3946** *Doctoral Strategy, Governance, and Leadership*

Health Policy Track:

Select two courses (6 hours) from the following:

- **PHD 3812** *Comparative Healthcare Systems: Policy Challenges and Economic Perspectives*
- **PHD 3830** *Ethics and Policy*
- **PH 3825** *Public Health Law*

- **PH 3915** *Methods for Economic Evaluation of Health Programs*
- **PH 3818** *Texas Health Policy: Emerging Issues of Health Program*
- **PH 3736** *U.S. Healthcare Payment Systems and Policy*
- **PH 3920** *Health Services Delivery and Performance*

Dissertation research in the selected major area of study should culminate in the completion and presentation, in written form, of an original research project.

For all majors, this includes the completion of:

- **PHD 3970** *Doctoral Dissertation Proposal Development in Management, Policy, and Community Health* (this course is recommended, but optional)
- **PH 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/>.

Minor in Management, Policy and Community Health

Course of study - required:

- Nine (9) semester credit hours for MS, DrPH, and PhD students majoring in other public health disciplines.
- Students are expected to take courses focusing in one of the following topic areas:
 - Health Economics/Health Services Research, Health Policy, Healthcare Management, or Community Health Practice.
- In general, the courses in each topic area should be chosen from the following sets of courses:

Health Economics/Health Services Research:

- **PHD 3910** *Health Economics*
- **PH 3915** *Methods for Economic Evaluation of Health Programs*
- **PHD 3930** *Econometrics in Public Health*
- **PHD 3931** *Advanced Econometrics*
- **PH 3940** *Healthcare Outcomes and Quality Research*
- **PH 3920** *Health Services Delivery and Performance*
- **PHD 3935** *Advanced Health Economics*
- **PHD 3926** *Health Survey Research Design*
- **PH 3998** *Decision Analysis*

Health Policy

- **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*

Healthcare Management

- MS minor requirements (select 3 courses in addition to Healthcare Management Practicum)
 - **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*
 - **PH 9997** *Practicum* (must be in Healthcare Management and approved by HCM faculty member)

- PhD minor requirements (select 3 courses)
 - **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** *Organization and Management Theory*

Community Health Practice

- MS Minor requirements (select 3)
 - **PHM 3630** *Health Program Planning, Implementation, and Evaluation*
 - **PH 3998** *Community Assessment Concepts, Methods, and Technologies*
 - **PHM 3922** *Economic and Social Determinants of Health*
 - **PHM 3620** *Principles and Practice of Public Health*
- DrPH Minor requirements
 - **PHD 1118** *Introduction to Qualitative Research Methods*
 - **PHD 3998** *Diversity*
 - **PHD 3998** *CHP Core I: Principles and Methods*

Specific courses can be changed to meet the needs of each student with the approval of the MPACH member of the student's committee. If the student's committee does not have an MPACH member, the student is expected to seek guidance in choosing minor courses (as described above) from an MPACH faculty member in their desired minor area.

Breadth Examples

All breadth courses for students are determined individually by the student's committee. Recommended courses for the Leadership or Healthcare Information Technology Management breadths are listed below.

Leadership Breadth Example

Course selections for a Leadership breadth for DrPH students (9 credit hours required)

Courses (Student chooses any of the courses listed below or others as defined by the student's committee for a total of 9 credit hours)

- **PH 5200** *Foundations of Leadership* (3 credits)
- **PH 3815** *Health Policy Analysis* (3 credits)
- **PH 3825** *Public Health Law* (3 credits)
- **PHD 3830** *Ethics and Policy* (3 credits)
- **PHD 3946** *Strategy, Governance, and Leadership* (3 credits)
- **PHD 3950** *Advanced Leadership Studies in Public Health* (3 credits)

- **PHD 5210** *Selected Readings in Leadership Studies* (2 credits)
- **PH 5220** *Gender and Leadership* (2 credits)

Specific courses can be changed to meet the needs of each student with the approval of the Leadership member of the student's committee. If the student's committee does not have a Leadership member, the student is expected to seek guidance in selecting courses from the Leadership Studies Concentration coordinators.

Healthcare Information Technology Management (HITM) Breadth

A HITM breadth focuses on the roles of information technology in healthcare delivery, and associated management and policy issues from the viewpoints of providers, consumers, and society. Doctoral students interested in pursuing HITM are required to take a minimum of 9 credit hours (minimum 3 courses). Recommended courses for the HITM breadth area includes:

- **PHD 3998** *Operations, Technology, & Decision Management* (3 credits)
- **PHD 3750** *Policy Issues in Health IT* (3credits), OR
 - **HI 6324** *Health Information Technology Policy** (3 credits)
- **HI 5381** *Methods of Public Health Informatics** (3 credits)
- **HI 5327** *Standards in Health Informatics** (3 credits)
- **PHD 3998** *Health Care Delivery in EHR Enabled Environment* (3 credits) OR
 - **HI 6328** *Health Care Delivery in EHR Enabled Environment** (3 credits)

*These courses are offered by UTHealth School of Biomedical Informatics.

Selection of courses for HITM breadth could depend on whether the student is pursuing a major and/or minor within the Department of MPACH. Students are expected to seek guidance from the HITM breadth coordinator in selection of courses.

Courses, Management, Policy and Community Health

PHM 3620 *Principles and Practice of Public Health*

Troisi, 3 credits, a

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*

The Faculty in Management, Policy and Community Health, 3 credits, b

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*

The Faculty in Management, Policy and Community Health, 4 credits, (periodically offered)

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 *Introduction to Management and Policy Sciences*

The Faculty in MPACH, 3 credits, a, b, cd (always offered face to face and online)

This is the designated MPH core course for MPACH.

This course surveys 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 and decision-making processes; methods of policy analysis, public sector institutions, management, and decision-making; and private sector healthcare institutions, management, and decision-making.

PHM 3720 *Healthcare Finance*

Delgado, McKelvey, 2 credits, b

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*

Mikhail, 3 credits, b

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*

Appari, 3 credits, b

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*

Gemeinhardt, 3 credits, b

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*

Krause, Morgan, 3 credits, b

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. It is critical to understand the policies that have formed and drive the operations of public, private, and commercial health services. This course provides the framework for a comprehensive understanding of current approaches, significant limitations, and potential impact of policy initiatives. Students will apply systems theory and policy concepts to theoretically redesign the U.S. healthcare system.

PH 3737 *Cost-effectiveness for Public Health Interventions*

Brown, 2 credits, cd

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*

The Faculty in MPACH, 3 credits, b

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. After completing this course, students should be able to explain the

role of law in the U.S. health care system, including explaining the civil liability legal principles concerning the provision of medical treatment by individual healthcare providers and institutional providers; state licensure of individual providers and healthcare facilities; and hospital/physician issues affecting administration of health care. 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 *Organization and Management Theory*

Wells, 3 credits, (periodically offered)

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* Gemeinhardt, 3 credits, a

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*

Revere, 3 credits, b

This course provides students with requisite knowledge and skills for understanding, evaluating, and improving clinical and operational processes, as well as healthcare outcomes. 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*

The Faculty in MPACH, 3 credits, a

This course introduces students to key management functions, processes, issues, and challenges currently faced 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 analyses; understanding how policies and regulations affect operations; making process improvements (e.g., reducing

patient wait times); understanding performance measures and how these are used for mandatory reporting and tracking program or patient outcomes; and learning about tools, concepts or techniques used to improve management performance.

PHD 3748 *Advanced Case Applications in Healthcare Finance*

The Faculty in MPACH, 3 Credits, (periodically offered)

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*

Appari, 3 credits, (periodically offered)

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*

Appari, 3 credits, a

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

PH 3800 *Working with Diverse Communities*

Schick, 3 credits, a

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*

The Faculty in MPACH, 3 credits, a, c

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*

The Faculty in MPACH, 3 credits, a, c

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*

Morgan, Krause, 3 credits, b

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*

Begley, 3 credits, a

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*

Begley, Rowan, Brown, 3 credits, b

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. Students are introduced to the latest policy debates on each topic through selected readings and informed speakers.

PH 3825 *Public Health Law*

The Faculty in MPACH, 3 credits, b

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*

Linder, 3 credits, a

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.

PHD 3846 *Quality Management and Improvement in Healthcare*

Revere, 3 credits, a

This course provides students with requisite knowledge and skills for understanding, managing, and evaluating quality, performance improvement, and patient safety within a healthcare organization. The various perspectives on the challenges of providing safe and reliable health services are covered. Operational approaches to quality improvement adapted from industry are examined and practiced in cases and exercises. Students learn to identify key aspects of systems and workflows. They employ currently used analytical tools to analyze quality-related systems problems and identify potential solutions. Finally, the course will assist students in improving management skills in the affective realm.

PH 3855 *Climate Change Policy*

The Faculty in MPACH, 3 credits, (periodically offered)

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*

Swint, Lairson, Brown, 3 credits, a, b

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.

PHD 3910 *Health Economics*

Swint, Lairson, Brown, 3 credits, a, b

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. In addition to the course requirements for MPH students, doctoral students will be required to write a paper that identifies and discusses the major policy and research issues in one of the areas of health economics that is introduced in the course, critically reviews the relevant published research in this area, and synthesizes their view of the state of this research and suggests what types of research might not be most fruitful, e.g., as one might want to pursue in a dissertation.

PH 3915 *Methods for the Economic Evaluation of Health Programs*

Lairson, Rajan, Swint, Brown, 3 credits, a, c

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.

PH 3920 *Health Services Delivery and Performance*

Rowan, Morgan, Begley, Lairson, 3 credits, b

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*

The Faculty in MPACH, 3 credits, b

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 presents an overview of these concepts and is intended as the introductory course for students interested in the topic. 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.

PHD 3922 *Economic and Social Determinants of Health*

The Faculty in MPACH, 3 credits, b

This doctoral-level course illustrates the concept of population health and analyzes the reason for health disparities within and between countries, focusing on socioeconomic and racial/ethnic disparities. It takes an approach to public 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; and exploring how economic, social, and cultural conditions affect individual risk factors human behavior, and biology. The course also presents the methods used in health disparities research and assesses relevant economic and social policies.

PHD 3926 *Health Survey Research Design*

Morgan, Schick, 3 credits, a

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: PH 1690 and PHM 2610 or equivalents

PHD 3930 *Econometrics in Public Health*

Weber, 3 credits, a

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*

Rajan, 3 credits, b

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*

Lairson, Rajan, Swint, 3 credits, a (odd-numbered years)

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*

Rowan, 3 credits, a

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*

Krause, Ganduglia-Cazaban, 3 credits, b

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*

Begley, Rowan, Morgan, Rajan, 3 credits, a

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*

Mikhail, 3 credits, a

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*

Betancourt, 3 credits, cd (hybrid course)

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*

Troisi and the Faculty in Leadership Studies Concentration, 3 credits, b

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. The course content will examine in-depth the 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, which uses an experiential teaching method called "Case-in-Point" that emphasizes student and faculty interaction with the class as the unit of leadership analysis. Three themes of reflection, critical thinking, and communication support the examination of leadership dilemmas, patterns, behaviors, and outcomes. Discussions of leadership cases through peer consultation, practice in leading, and dialogue with leaders strengthen the students' capabilities to apply leadership theories, concepts, and perspectives to careers in research and practice. 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*

Brown, 3 credits, (periodically offered)

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*

Morgan, Revere, 3 credits, a, b

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; successfully completed the preliminary examination; and, working with dissertation advisor, identified a specific dissertation topic, draft objectives, and an initial methodological approach

PH 3998 *Special Topics in Management, Policy and Community Health*

The Faculty in MPACH, a, b, cd, credit hours vary among Special Topics courses

Topics vary each semester and provide in-depth study of various public health issues. Previous topics have included:

Accounting for Healthcare Management

Advanced Policy Studies

CHP Core I

CHP Core II: Proposal Development

CHP Core III: Implementation and Analysis

Community Assessment Concepts, Methods, and Technologies

Current Issues in the Healthcare Delivery System

Decision Analysis

Federal Healthcare Programs

Geographic Information Systems Sciences

Health Demography of Mexico and Texas

Law and Science

Mixed Methods

Operations, Technology, & Decision Management

Public Health in Medicine

Quality, Cost and Value Evaluation in Healthcare

The Study of Policy

Thinking for Public Health

Federal Policymaking: A View from Inside the Federal Government Course (3 credit hours)/The

*Archer Center Washington Internship (6 credit hours)**

*Students must register for both the course and internship, which totals 9 credit hours with prior approval.

PH 3999 *Independent Study in Management, Policy and Community Health*

The Faculty in MPACH, 1-9 credits, a, b, cd

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.

PH 9996 *Capstone Course for MPH Students*

The Faculty in UTHealth School of Public Health, 3 credits, a, b, cd

The culminating experience capstone course for MPH students is a class that requires synthesis, integration, and problem-solving. These activities, in turn, require that students 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. It is preferable that the practicum be completed prior to the Capstone Course, but it may be completed concurrently.

PH 9997 *Practicum*

The Faculty in MPACH, 1-9 credits, a, b, cd

A practicum is determined by the student and advisor, and supervised by a member of the MPACH faculty. Only three (3) semester credit hours of practicum will count towards a degree program.

PH 9998 *Culminating Experience/Thesis Research*

The Faculty in MPACH, 1-9 credits, a, b, cd

Culminating experience/thesis research is determined by the student with approval of the student's advisory committee. Only three (3) semester credit hours of culminating experience/thesis research will count towards a degree program.

PH 9999 *Dissertation Research*

The Faculty in MPACH, 1-9 credits, a, b, cd

Dissertation research is determined by the student with approval of the student's advisory committee. Only six (6) semester credit hours of dissertation research will count towards a degree program.

INTERDEPARTMENTAL CONCENTRATIONS AND OTHER INTERDEPARTMENTAL COURSES

Interdepartmental Concentrations

In addition to majors and minors, students in a degree program at UTHealth School of Public Health can add an interdisciplinary concentration. A concentration is a problem-based area that spans disciplinary fields and thus draws on faculty expertise from two or more departments. Concentrations are supported by a specific curriculum that consists of 9-14 credit hours of coursework (at least one or two required core interdisciplinary courses plus elective courses). The concentration is noted on the official transcript. In most cases, with careful selection of courses, opting for an interdisciplinary concentration will not increase the total number of credit hours required for a degree.

Global Health Concentration

The Global Health Concentration 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. Global health recognizes that many of the solutions to today's public health challenges are beyond the capacity of national institutions. The challenges have to be addressed through international collaboration and negotiation as well as through grassroots action.

The goal of the Global Health Concentration is to prepare students for positions that involve public health decision-making and research in a changing world. It encourages students in the Global Health Concentration to become "global system thinkers."

In this concentration, students are provided the opportunity to relate their knowledge of public health to the larger trends and issues that affect all societies. This concentration explores the transnational interactions of peoples, cultures, economies and policies; the globalizing influences of communication media, multinational corporations, the United Nations, as well as other multilateral institutions, local governments, and private philanthropy; the technological and environmental changes and their effect on disease epidemiology and the susceptibility of populations; the growing impact of non-governmental organizations and local grassroots movements; and the search for world order, law, and human rights.

After enrollment in a degree program, students in any department, and at any campus may elect to add the Global Health Concentration to their course of study. Students elect the Global Health Concentration by completing the required request form that must be signed by the student's academic advisor and a member of the Global Health Concentration faculty who agrees to serve on the student's advisory committee.

Course of Study

The Global Health Concentration will require the completion of 12 credit hours: four credits of required courses (PH 5610 and PH 5612) and eight credits of electives with global health content. Some of the concentration courses may also count as degree program major, minor, or breadth requirements. Global Health Concentration students in degree programs requiring a practicum must have an experience that is relevant to global health. Students in the concentration completing a thesis or dissertation must select a topic relevant to global health. The faculty member representing the Global Health Concentration will determine if the student has met the requirements of the concentration. Completion of the concentration is noted on the student's transcript.

MPH students in the Global Health Concentration who choose the Capstone Course instead of a thesis as their culminating experience need to complete an extended practicum in a global health setting. Students will tailor their MPH practicum to be a cross-cultural field experience. The Global Health Concentration faculty advisor helps make the decision about what is a “cross-cultural field experience.” An acceptable written report and a public report will be presented to the Global Health Concentration faculty advisor. The public presentation will be made in a global health meeting (including the Global Health Seminar, other UTHealth School of Public Health forums, or at a national meeting). The “Global Health Concentration Instruction Sheet for Students Electing the MPH Capstone Course as a Culminating Experience” page is posted on the Global Health Concentration website.

Courses, Global Health Concentration

PH 5610 *Global Health Overview*

Homedes and the Faculty in Global Health Concentration, 3 credits, a

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.

This course is required for students enrolled in the Global Health Concentration.

PH 5612 *Global Health Seminar*

The Faculty in Global Health Concentration, 1 credit, a, b

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.

This course is required for students enrolled in the Global Health Concentration.

PH 5613 *Critical Cinema for Public Health*

The Faculty in Global Health Concentration, 2 credits, a

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*

The Faculty in Global Health Concentration, a, b, cd, credit hours vary among Special Topics courses

Elective Courses, Global Health Concentration

Electives for the Global Health Concentration include, but are not limited to, the list below. Detailed descriptions of the courses can be found in the academic departments' course sections of the catalog. The courses offered may vary each year. Courses must be approved by the student's Global Health Concentration faculty advisor.

Health Promotion and Behavioral Sciences

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

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

PH 1424 *Social Justice and Public Health*

PH 1498 *Food Policy* (Special Topics course)

Epidemiology, Human Genetics and Environmental Sciences

PH 2280 *Environmental Microbiology*

PHM 2290 *Immunology*

PH 2615 *Epidemiology II*

PH 2730 *Epidemiology and Control of Infectious Diseases*

PHW 2775 *Epidemiologic Methods in Racial and Ethnic Disparities*

PHM 2800 *Tropical Infectious Diseases*

PHM 2846 *Rapid Assessment Methods in Public Health*

PH 2498 *Global Occupational Health* (Special Topics course)

PH 2498 *Infection Control and Biosafety* (Special Topics course)

Management, Policy and Community Health

PHW 3660 *Demographic Data Methods for Public Health Practitioners*

PHD 3812 *Comparative Healthcare Systems: Policy Challenges and Economic Perspectives*

PHM/PHD 3922 *Economic and Social Determinants of Health*

PHD 3926 *Health Survey Research Design*

PH 3998 *Public Health and Human Rights* (Special Topics course)

Interdepartmental

PH 5613 *Critical Cinema for Public Health*

Global Health Concentration Program Directors

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Health Disparities Concentration

The Health Disparities Concentration is intended for students who want to focus practice and/or research activities on the recognition, description, and elimination of disparities. Health disparities have been defined as differences in "the overall rate of disease incidence, prevalence, morbidity, mortality or survival rates" (Minority Health and Health Disparities Research and Education Act, United States Public Law 106-525 (2000), p. 2,498). Health disparities exist across

race/ethnic groups, geographic residence, gender, age, and disability status. Determinants of health disparities are multifactorial and include cultural factors, socioeconomic factors, racism/discrimination, and political factors.

Public health and health care practitioners and researchers play a critical role in the identification and amelioration of health disparities. Through this concentration, UTHealth School of Public Health builds upon extensive faculty expertise and existing courses to provide focused training in health disparities for students and other professionals. The concentration expands on the customary degree program, providing an integrated, multidisciplinary approach.

After enrollment in a degree program, students in any department, and at any campus may elect to add this concentration to their course of study. Students elect the Health Disparities Concentration by completing the required request form that must be signed by the student's academic advisor and a member of the Health Disparities Concentration faculty who agrees to serve on the student's advisory committee.

Course of Study

The Health Disparities Concentration will require the completion of 13 credit hours: seven (7) credit hours of required courses (listed below) and six (6) credit hours of elective courses with health disparities content. Some of the concentration courses may also count as degree program major, minor, or breadth requirements. Health Disparities Concentration students in degree programs requiring a practicum must have an experience that is relevant to health disparities. Students in the concentration completing a thesis or dissertation must select a topic relevant to health disparities. The faculty member representing the Health Disparities Concentration will determine if the student has met the requirements of the concentration. Completion of the concentration is noted on the student's transcript.

Courses, Health Disparities Concentration

Complete the following 1-credit hour seminar:

PH 5102 Health Disparities Core Seminar

Wilkerson (fall) and Andrulis (spring), 1 credit, a, b

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.

This is a seminar course for students in the Health Disparities concentration. The seminar is a venue for students to discuss current health disparities issues in a supportive environment of peers and faculty.

Complete two of the following 3-credit hour courses:

PHW 2775 Epidemiologic Methods in Racial and Ethnic Disparities

Salinas, Gonzalez, 3 credits, a

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 examining race/ethnicity; demographic trends; mortality and life expectancy; and social, etiologic, 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 and ethnicity in epidemiological studies.

Prerequisites: PHM 2612 (or PHM 2610)

PHM/PHD 3922 *Economic and Social Determinants of Health*
Swint, Selwyn, 3 credits, b

This course illustrates the concept of population health and analyzes the reason for health disparities within and between countries, focusing on socioeconomic and racial/ethnic disparities. The course takes an approach to public 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; and exploring how economic, social and cultural conditions affect individual risk factors, human behavior, and biology. The course also relates the methods used in health disparities research and assesses relevant economic and social policies.

PH 5101 *Disparities in America: Working toward Social Change*

Schick and the Faculty in Health Disparities Concentration, 3 credits, a, c – intensive 1-week format course

This course examines the social and societal factors that are fundamental in formulating public policy objectives to reduce and ultimately eliminate health disparities in America. More than 25 years of research indicate that there are wide disparities in health throughout America. Health disparities include differences in the incidence, prevalence, mortality, and burden of diseases, as well as other adverse health conditions that exist when specific population subgroups are compared. It is now known that the distribution of health is not random, but that health is systematically distributed and according to different levels of social advantage. This course is offered in the fall semester at a member HDEART institution in Houston and videoconferenced to other member institutions outside of Houston. It will be taught at either the UTHHealth School of Public Health, The University of Texas MD Anderson Cancer Center, Rice University, University of Houston, or Texas Southern University. It is sometimes offered as a week-long summer course in June. Students who register for the summer course will be required to pay an additional registration fee, which is collected by the offering institution, other than UTHHealth School of Public Health, to cover course materials given to students.

Elective Courses, Health Disparities Concentration

Electives for the Health Disparities Concentration include, but are not limited to, the list below. Detailed descriptions of the courses can be found in the academic departments' course sections of the catalog. The courses offered may vary each year. Courses must be approved by the student's Health Disparities Concentration faculty advisor.

Health Promotion and Behavioral Sciences

PHM/PHD 1113 *Advanced Methods for Planning and Implementing Health Promotion Programs**

PHM/PHD 1116 *Advanced Methods for Planning and Implementing Health Promotion Programs**

PH 1237 *Obesity, Nutrition, & Physical Activity*

PH 1238 *Adolescent Sexual Health*

PH 1321 *Social Networks and Health*

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

PH 1424 *Social Justice and Public Health*

PH 1498 *Systems Thinking in Public Health* (Special Topics course)

Epidemiology, Human Genetics and Environmental Sciences

PHM/PHD 2101 *Contemporary Issues in Environmental and Occupational Health*

PHM/PHD 2190 *Environmental and Occupational Health Policy*

PHW 2740 *Cardiovascular Disease Epidemiology and Prevention*

PHM 2745 *Cancer Epidemiology*

PHWM/PHWD 2835 *Injury Epidemiology*

PH 2998 *Epidemiology and Mental Health* (Special Topics course)*

Management, Policy and Community Health

PHW 3660 *Demographic Data Methods for Public Health Practitioners*

PH 3800 *Working with Diverse Communities*

PHM/PHD 3810 *Health Policy in the United States*

PH 3818 *Texas Health Policy: Emerging Issues and New Approaches*

PH 3920 *Health Services Delivery and Performance*

PHD 3957 *Topics in Health Economics*

PH 3998 *Community Assessment Principles, Methods, and Technologies* (Special Topics course)*

Interdepartmental

PH 5613 *Critical Cinema for Public Health*

*Note: For these courses, the student project must focus on a health disparity to count towards the concentration.

Health Disparities Concentration Program Directors

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Leadership Studies Concentration

The Leadership Studies Concentration is intended for students interested in exploring how leadership theories and concepts apply to public health challenges. Specifically, the concentration will explore how the development of leadership capabilities at the individual, institution and system level can create changes that improve population health and well-being. Leadership studies recognize that many of the solutions to today's public health problems are beyond the capacity of traditional institutions and conventional strategies. Modern public health challenges need innovative approaches and the collaboration of institutions, professionals and communities. Organizational, professional, and individual

change requires an understanding of change dynamics and the ability to lead others toward a common purpose.

The goal of the Leadership Studies Concentration is to educate students in leadership principles, so that they can face public health challenges as knowledgeable professionals ready to engage in change for improved health outcomes through research and practice. The Leadership Studies Concentration encourages students to think in terms of the future of public health.

In this concentration, students are provided the opportunity to develop their personal and professional leadership attributes and to apply these to current public health issues in research and practice. Furthermore, students explore the literature on leadership studies to gain an understanding of its theories, principles, and research. Lastly, students relate their knowledge of public health to leadership approaches that generate change and health improvement in communities, organizations, and society. The concentration expands on the customary degree program, providing an integrated, multidisciplinary approach.

After enrollment in a degree program, students in any department, and at any campus may elect to add the Leadership Studies Concentration to their course of study. Students elect the Leadership Studies Concentration by completing the required request form that must be signed by the student's academic advisor and a member of the Leadership Studies Concentration faculty who agrees to serve on the student's advisory committee.

Course of Study

The concentration will require the completion of 12 credit hours: four (4) credit hours of required courses (PH 5200 and PHM/PHD 5210) and eight (8) credit hours of electives with leadership studies content. Some of the concentration courses may also count as degree program major, minor, or breadth requirements. Leadership Studies Concentration students in degree programs requiring a practicum must have an experience that is relevant to leadership. Students in the concentration completing a thesis or dissertation must select a topic relevant to leadership. The faculty member representing the Leadership Studies Concentration will determine if the student has met the requirements of the concentration. Completion of the concentration is noted on the student's transcript.

MPH students in the Leadership Studies Concentration who choose the Capstone Course instead of a thesis as their culminating experience will be required to undertake a leadership project during the PHM 5210 seminar course.

Courses, Leadership Studies Concentration

PH 5200 *Foundations of Leadership in Public Health*

Emery, Cuccaro, and the Faculty in Leadership Studies Concentration, 3 credits, a

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.

This course is required for students enrolled in the Leadership Studies Concentration but is open to all students.

PHM 5210 *Selected Readings in Leadership Studies*

The Faculty in Leadership Studies Concentration, 1 credit, a

PHD 5210 *Selected Readings in Leadership Studies*

The Faculty in Leadership Studies Concentration, 2 credits, a

This seminar is 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.

This seminar is required for students enrolled in the Leadership Studies Concentration, but is open to all students.

PH 5220 *Gender and Leadership*

Troisi, 2 credits, b

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*

The Faculty in Leadership Studies Concentration, a, b, c, d, credit hours vary among Special Topics courses

Elective Courses, Leadership Studies Concentration

Electives for the Leadership Studies Concentration include, but are not limited to, the list below. Detailed descriptions of the courses can be found in the academic departments’ course sections of the catalog. The courses offered may vary each year. Courses must be approved by the student’s Leadership Studies Concentration faculty advisor.

Health Promotion and Behavioral Sciences

PHD 1320 *Ethics and Health Care*

PH 1325 *Research Ethics for Public Health*

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

PH 1424 *Social Justice and Public Health*

Management, Policy and Community Health

PHD 3743 *Organizational and Management Theory*

PHM 3744 *Organizational Behavior and Human Resource Management in Health Services Organizations*

PHD 3830 *Ethics and Policy*

PHM/PHD 3922 *Economic and Social Determinants of Health*

PHD 3946 *Strategy, Governance, and Leadership*
PHM 3949 *Strategic Leadership in Public Health*
PHD 3950 *Advanced Leadership Studies in Public Health*
PH 3998 *Fundraising for Public Health* (Special Topics course)
PH 3998 *Public Health and Human Rights* (Special Topics course)

Interdepartmental

PH 5220 *Gender and Leadership*
PH 5298 *Special Topics in Leadership Studies*
PH 5610 *Global Health Overview*

Leadership Studies Concentration Program Directors

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Maternal and Child Health Concentration

The Maternal and Child Health Concentration (MCH) is intended for graduate-level students interested in furthering their skills in the development and delivery of programs and services for women, infants, children, and adolescents. The training program 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. The MCH Concentration is available to strengthen the capacity of the public health work force to meet the diverse needs of maternal and child health populations via accessible and customized public health education and training. An in-depth diverse curriculum in maternal and child health fills a critical deficit in public health education and prepares graduates to work in areas of public health practice related to women and children, and to interface more effectively with community and governmental programs.

After enrollment in a degree program, students in any department and at any campus may elect to add Maternal and Child Health Concentration to their course of study. Students elect the Maternal and Child Health Concentration by completing the required request form that must be signed by the student's academic advisor and a member of the Maternal and Child Health Concentration faculty who agrees to serve on the student's advisory committee.

Course of Study

The Maternal and Child Health Concentration will require the completion of 12 credit hours: six (6) credit hours of required courses (PH 5301 and PH 5311) and six (6) credit hours of electives with maternal and child health content. Some of the concentration courses may also count as degree program major, minor, or breadth requirements. Maternal and Child Health Concentration students in degree programs requiring participation in a practicum must have an experience that is relevant to maternal and child health. Students in the concentration completing a thesis or dissertation must select a topic relevant to maternal and child health. The faculty member representing the Maternal and Child Health Concentration will determine if the student has met the requirements of the concentration. Completion of the concentration is noted on the student's transcript.

Courses, Maternal and Child Health Concentration

PH 5301 *Maternal and Child Health Core Training Seminar I*
Waller, 3 credits, a

PH 5311 *Maternal and Child Health Core Training Seminar II*
Byrd-Williams, 3 credits, b

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.

Prerequisites: These courses are required for students enrolled in the MCH Concentration. They must be taken in sequence; PH 5301 (fall), taken first, followed by PH 5311 (spring).

Elective Courses, Maternal and Child Health Concentration

Electives for the Maternal and Child Health Concentration include, but are not limited to, the list below. Detailed descriptions of the courses can be found in the academic departments' courses sections of the catalog. The courses offered may vary each year. Courses must be approved by the student's maternal and child health advisor.*

Health Promotion and Behavioral Sciences

PHM/PHD 1113 *Advanced Methods for Planning and Implementing Health Promotion Programs*

PHM/PHD 1116 *Advanced Methods for Planning and Implementing Health Promotion Programs*

PHM 1120 *Introduction to Program Evaluation*

PH 1232 *Public Health Nutrition Practice*

PH 1237 *Obesity, Nutrition & Physical Activity*

PH 1238 *Adolescent Sexual Health*

PHD 1239 *Theories of Child and Adolescent Development*

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

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

PH 1498 *Child and Adolescent Health Promotion* (Special Topics course)

PH 1498 *Seminar in Child and Adolescent Health* (Special Topics course)

Epidemiology, Human Genetics and Environmental Sciences

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

PH 2765 *Pediatric Epidemiology*

PHW 2775 *Epidemiologic Methods in Racial and Ethnic Disparities*

PH 2830 *Clinical Genetics in Epidemiology*

PHM/PHD 2845 *Nutritional Epidemiology*

PH 2998 *Child & Adolescent Health Care* (Special Topics course)

PH 2998 *Vaccines & Immunization Programs* (Special Topics course)

Management, Policy and Community Health

PHM 3630 *Health Program Planning, Implementation & Evaluation*

PH 3800 *Working with Diverse Communities*

PHM/PHD 3810 *Health Policy in the United States*

PH 3818 *Texas Health Policy: Emerging Issues and New Approaches*

PHM/PHD 3922 *Economic and Social Determinants of Health*

PH 3998 *Community Assessment Concepts, Methods, and Technologies* (Special Topics course)

Interdepartmental

PH 5101 *Disparities in America: Working toward Social Change*

PH 5102 *Health Disparities Core Seminar*

PH 5401 *Physical Activity and Public Health Practice*

PH 5610 *Global Health Overview*

*Note. Availability of electives will vary each semester; students should consult the UTHealth School of Public Health semester course schedule. Alternative electives can be selected with written approval from the MCH director.

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 Concentration or in the Maternal and Child Health Certificate Program (see “Non-Degree Programs” section) 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 open to students located in Dallas or Houston or at Grand Valley State University in Michigan. Trainee Fellows are required to take an additional four (4) credit hours of Fellowship Training Seminar, in addition to the MCH Core Training Seminar. 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.

PH 5302 *Maternal and Child Health Fellowship Training Seminar I*

Byrd-Williams, 2 credits, a

PH 5312 *Maternal and Child Health Fellowship Training Seminar II*

Byrd-Williams, 2 credits, b

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.

Prerequisites: These courses are required for students selected for the Maternal and Child Health Trainee Fellowship Program. They must be taken in sequence; PH 5302 (fall), taken first, followed by PH 5312 (spring).

Approximately 4-8 Trainee Fellowships are available to students at any campus. Participants in the MCH Training Fellowship Program will be selected through a competitive application process. Partial tuition support is available for those students selected to participate in this program.

Maternal and Child Health Concentration and Trainee Fellowship Program Director

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Nutrition and Public Health Concentration

The Nutrition and Public Health Concentration provides opportunities and training for students to focus practice and/or research activities on dietary assessment methodology, nutritional epidemiology, food policy and systems, behavioral nutrition interventions, and medical nutrition therapy. The goal of the Nutrition and Public Health Concentration is to prepare students and those in the public health and healthcare workforce to understand the role of nutrition in disease prevention and health promotion, dietary assessment, nutritional epidemiologic methods, nutritional physiology, and food and nutrition policy. The emergence of a robust literature on behavioral, environmental, and policy approaches to nutrition promotion supports the multidisciplinary aspect of the nutrition field. The market demand for professionals trained in nutrition and public health is increasing with the rising prevalence of diet-related chronic diseases, such as obesity, diabetes, and cardiovascular disease. The Nutrition and Public Health Concentration is closely aligned with research and community events coordinated through the Michael & Susan Dell Center for Healthy Living.

After enrollment in a degree program, students in any department, and at any campus may elect to add this concentration to their course of study. The concentration is also open to students in the Dietetic Internship Program (see <https://sph.uth.edu/research/centers/dell/dietetic-internship-program>). Students elect the Nutrition and Public Health Concentration by completing the required request form that must be signed by the student's academic advisor and a member of the Nutrition and Public Health Concentration faculty who agrees to serve on the student's advisory committee.

Course of Study

The Nutrition and Public Health Concentration will require the completion of 12 credit hours: nine (9) credit hours of courses and three (3) credit hours of practicum, thesis, or dissertation with a nutrition and public health focus. Some of the required courses may also count as degree program major, minor, or breadth requirements. Nutrition and Public Health Concentration students in degree programs requiring participation in a practicum must have an experience that is relevant to nutrition and public health. Students in the Nutrition and Public Health concentration completing a thesis or dissertation must also select a topic relevant to nutrition and public health. The faculty member representing the Nutrition and Public Health Concentration will determine if the student has met the requirements of the concentration. Completion of the concentration is noted on the student's transcript.

Courses, Nutrition and Public Health Concentration

Students in the Nutrition and Public Health Concentration must complete at least three (3) courses (9 credit hours) selected from the list below or approved by the student's Nutrition and Public Health Concentration faculty advisor. The descriptions for the nutrition courses below can be found in the "Health Promotion and Behavioral Sciences" and "Epidemiology" sections of the catalog.

Health Promotion and Behavioral Sciences

PHM 1231 *Advances in Medical Nutrition Therapy*

PHM 1232 *Public Health Nutrition Practice*

PH 1237 *Obesity, Nutrition, & Physical Activity*

PH 1498 *Food Policy* (Special Topics course)

Epidemiology, Human Genetics and Environmental Sciences

PH 2755 *Nutrition Research Methods*

PHM/PHD 2845 *Nutritional Epidemiology*

Interdepartmental

PH 5030 *Diabetes Seminar*

PH 9997 *Practicum – Diabetes Seminar* (for Dietetic Interns)

Nutrition and Public Health Concentration Program Director

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Physical Activity and Health Concentration

The Physical Activity and Health Concentration provides opportunities and training for students to focus practice and/or research activities on physical activity assessment, epidemiologic methods, intervention planning, physiologic mechanisms and health outcomes, and policy development. The emergence of the field of physical activity and public health is a result of the alignment of public health science and exercise science. Early etiologic studies into the mechanisms and related benefits of physical activity on health and disease have expanded to include improvements in assessment and surveillance. The emergence of a robust literature on behavioral, environmental, and policy approaches to physical activity promotion has allowed this field to expand into a multi-disciplinary one.

The goal of the Physical Activity and Health Concentration is to prepare students to enter the public health and health care workforce with an understanding of the role of physical activity in disease prevention, including related biological and physiological mechanisms, physical activity assessment, health behavior change, public health practice, programming, and policy. This concentration 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.

After enrollment in a degree program, students in any department, and at any campus may elect to add this concentration to their course of study. Students elect the Physical Activity and Health Concentration by completing the required request form that must be signed by

the student's academic advisor and a member of the Physical Activity and Health Concentration faculty who agrees to serve on the student's advisory committee.

Course of Study

The concentration will require the completion of 12 credit hours – six (6) credit hours of required courses (listed below) and six (6) credit hours of electives with physical activity content. Some of the concentration courses may also count as degree program major, minor, or breadth requirements. Physical Activity and Health Concentration students in degree programs requiring a practicum must have an experience that is relevant to physical activity and health. Students in the concentration completing a thesis or dissertation must select a topic relevant to physical activity and health. The faculty member representing the Physical Activity and Health Concentration will determine if the student has met the requirements of the concentration. Completion of the concentration is noted on the student's transcript.

Courses, Physical Activity and Health Concentration

PH 5400 *Physical Activity Assessment and Surveillance*
Gabriel, 3 credits, cd (every other year)

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.

This course is required for students enrolled in the Physical Activity and Health Concentration.

Complete one of the following 3-credit hour courses:

PH 5401 *Physical Activity and Public Health Practice*
Kohl, 3 credits, a (even-numbered years)

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.

PH 5402 *Social and Behavioral Aspects of Physical Activity*
Taylor, 3 credits, b

This course focuses on theory-based approaches for promoting physical activity from a behavioral sciences perspective. Topics include evidence and approaches to increase physical activity among racially/ethnically diverse groups and underserved populations (e.g., youth, older adults, adults with chronic conditions, and disabilities).

Elective Courses, Physical Activity and Health Concentration

Electives for the Physical Activity and Health Concentration include, but are not limited to, the list below. Detailed descriptions of the courses can be found in the academic departments' course sections of the catalog. The courses offered may vary each year. Courses must be approved by the student's physical activity and health advisor.

Health Promotion and Behavioral Sciences

PHM/PHD 1113 *Advanced Methods for Planning and Implementing Health Promotion Programs*

PHM/PHD 1116 *Advanced Methods for Planning and Implementing Health Promotion Programs*

PH 1237 *Obesity, Nutrition & Physical Activity Seminar* (1 semester)

PH 1498 *Disability and Public Health* (Special Topics course)

Epidemiology, Human Genetics and Environmental Sciences

PH 2615 *Epidemiology II*

PH 2720 *Epidemiology Proposal Development*

PH 2735 *Physical Activity and Health: Epidemiology and Mechanisms* (may be substituted for PH 5401)

PHD 2770 *NIH Proposal Development*

Interdepartmental

PH 5099 *Individual Study*

PH 5301 and PH 5311 *Maternal and Child Health Core Training Seminar I and II*

Physical Activity and Health Concentration Program Directors

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Other Interdepartmental Courses

PHM 5010 *Ethics in Public Health*

Spike, 1 credit, a, b

This course provides a systematic overview of major ethical issues pertaining to health care, delivery, health promotion, disease prevention, and health policy from a public health perspective. The course will include a survey of ethical issues in public health as well as important ethical issues in healthcare to which public health can contribute. Readings will include the APHA "Ethics and Public Health: A Model Curriculum," including case studies to be discussed in small groups. Students learn to recognize the primary features of an ethical problem in public health; become familiar with the language and discourse of public health ethics; recognize and analyze the social and cultural dimensions of ethical dilemmas in public health; and formulate a process for preventing and/or resolving ethical conflicts.

All master's students must successfully complete PHM 5010. This course is waived for students in the MD/MPH dual degree and Occupational Medicine Residency programs, as it is covered elsewhere in their programs.

PH 5020 *Innovative Thinking*

Ness, 2 credits, b

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*

Perry, Harrell, 3 credits, a

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*

Moore, Piga-Plunkett, 1 credit, c – Intensive 1-week format course

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. For ITV students, these cooking classes will be recorded and links will be provided for viewing.

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*

The Faculty in UTHealth School of Public Health, a, b, cd, credit hours vary among Special Topics courses

Selected Special Topics provide intensive coverage of interdepartmental theory and applications. Topics vary each semester. Previous topics have included:

Foundations of Scientific Writing in Public Health (see course description below)

Foundations of Academic Scientific Writing for Public Health

The History and Culture of Disease and Healing (see course description below)

Written Communication in Public Health Practice

PH 5098 *Foundations of Scientific Writing in Public Health*
Galeener, 3 credits, a, b, cd

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 *The History and Culture of Disease and Healing*
Krause, Delclos, McCurdy, Smith, 3 credits, a

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 Tuesdays from 7-8:30 p.m. 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*
The Faculty in Concentrations, 1-9 credits, a, b, cd

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 9996 *Capstone Course for MPH Students*

The Faculty in UTHealth School of Public Health, 3 credits, a, b, cd

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. It is preferable that the practicum be completed prior to the Capstone Course, but it may be completed concurrently.

FACULTY AT UTHEALTH SCHOOL OF PUBLIC HEALTH

Faculty in Biostatistics

Folefac D. Atem, Assistant Professor (Dallas Campus). BSc, University of Buea, Cameroon, 2002; MS Wright State University, 2006; PhD, University of Pittsburgh, 2010; PostDoc, Harvard University, 2014.

Research Interests: Longitudinal model; censored covariates; regression diagnostics and diagnostic testing.

Wenyaw Chan, Distinguished Teaching Professor. BS, National Central University, Taiwan, 1974; MS, Ohio State University, 1978; MS, Purdue University, 1982; PhD, Ohio State University, 1984.

Research Interests: Stochastic modeling; longitudinal studies.

Yong Chen, Assistant Professor. BSc, University of Science and Technology of China, 2003; MA, The Johns Hopkins University School of Arts and Sciences, 2005; PhD, The Johns Hopkins University School of Public Health, 2010.

Research Interests: Estimating equations and likelihood methods; Asymptotic theory; Multivariate survival analysis; Diagnostic test; Meta-analysis; Statistical genetics and genomics.

Dunlei Cheng, Assistant Professor. BA, Shanghai International Studies University, 1996; MA, Southern Illinois University-Carbondale, 2002; MA, Baylor University, 2004; PhD, Baylor University, 2007.

Research Interests: Bayesian inference; sample size calculation; diagnostic test.

Lung-Chang Chien, Assistant Professor. BS, National Taipei University, 1998; MS, National Tsing Hua University, 2000; DrPH, University of North Carolina – Chapel Hill, 2009.

Research interests: Spatiotemporal analysis; environmental epidemiology.

Barry R. Davis, Professor, Director, Coordinating Center for Clinical Trials. BS, Massachusetts Institute of Technology, 1973; MD, University of California, 1977; ScM, Brown University, 1981; PhD, Brown University, 1982.

Research Interests: Development and applications of statistical methods to clinical trials and epidemiology.

Stacia M DeSantis, Associate Professor. BA, Dartmouth College, 1999; MS, Columbia University, 2002; PhD, Harvard University, 2007.

Research Interests: Latent variable and mixture models, Markov models, Bayesian methods, meta-analysis.

Yun Xin Fu, Professor. BS, Zhongshan University, China, 1982; PhD, Reading University, England, 1988.

Research Interests: Biostatistics; bioinformatics; molecular evolution; population genetics and computational biology.

Soeun Kim, Assistant Professor. BA, Cambridge University, 2003; MS, Seoul National University, 2007; PhD, University of California Los Angeles, 2011.

Research Interests: Missing data; clinical trials.

Dejian Lai, Professor. BS, Jiangxi University, China, 1982; MS, The University of Texas at El Paso, 1989; PhD, The University of Texas at Dallas, 1994.

Research Interests: Biostatistics; chaos; demography; global health; life table; time series analysis; nonparametric methods; spatial statistics; statistical methods.

Ruoshan Li, Assistant Professor. BS, Peking University, 2006; PhD, Emory University, 2011.

Research Interests: Survival analysis; quantile regression; association; prediction; multivariate data.

Sheng Luo, Associate Professor. BE, Huangzhong University of Science & Technology, China, 1996; ME, Huangzhong University of Science & Technology, China, 2000; MS, University of Texas at Arlington, 2003; PhD, Johns Hopkins University, 2008.

Research Interests: Longitudinal and survival data analysis; genetic epidemiology; nonparametric statistics.

Hongyu Miao, Associate Professor. BS, Tsinghua University, China, 1999; MS, Tsinghua University, China, 2002; MS, University of Rochester, 2004; PhD, University of Rochester, 2007; MS, University of Rochester, 2011.

Research Interests: Probabilistic graphical model; differential equation model; multiscale network model; dynamic modeling and statistical inference; time series; statistical learning; structural bioinformatics; systems biology

Lemuel A. Moyé, Professor. BA, The John Hopkins University, 1974; MD, Indiana University School of Medicine, 1978; MS, Purdue University, 1980; PhD, The University of Texas School of Public Health at Houston, 1987.

Research Interests: Bayes methods; continuous time stochastic processes.

Luis G. Leon Novelo, Assistant Professor. BS, National Autonomous University of Mexico, 2002; MS, National Autonomous University of Mexico, 2005; PhD, Rice University, 2009.

Research Interests: Applications of statistical methods in biomedical problems, clinical trials and genomics; Bayesian Statistics: Model Selection, Nonparametric and MCMC; Big data.

Adriana Perez, Associate Professor. BSc, National University of Colombia, 1991; MSc, Tulane University, 1994; PhD Tulane University, 1995.

Research Interests: Statistical methods for handling missing data, statistical methods for epidemiological research (including modeling), design conduct and analysis of multicenter clinical trials, sampling and sample size issues in health studies, and statistical methods to account for the uncertainty due to measurement error.

Michael Swartz, Associate Professor. BA, Trinity University, 1997; BS, Trinity University, 1997; MA, Rice University, 2002; PhD, Rice University, 2004.

Research Interests: Bayesian methods with applications in Genetics, Epidemiology, and Behavioral Science; Model Averaging and Variable selection Methods; Disease Risk Modeling; Simulation Studies to evaluate Epidemiologic Methods.

Patrick M. Tarwater, Associate Professor of Biostatistics (El Paso Campus). BA, Texas Tech University, 1990; MS, Texas Tech University, 1992; PhD, The University of Texas Health Science Center at Houston, 1999.

Research Interests: Survival analysis; longitudinal data analysis; epidemic models

Barbara C. Tilley, Professor. BA, California State University, 1972; MS, University of Washington, 1975; PhD University of Texas School of Public Health, 1981.

Research Interests: Clinical trials design, clinical trials applications in trauma, neurological, aging, and health disparities research.

Ningtao Wang, Assistant Professor. BA, Nankai University, China, 2010; PhD, Pennsylvania State University, 2010.

Research Interests: Statistical genetics and genomics; computational biology; latent variable analysis; network analysis; data mining and machine learning.

Peng Wei, Associate Professor. BS, Peking University, 2004; MS, University of Minnesota, 2006; PhD, University of Minnesota, 2009.

Research Interests: Statistical Genomics and Genetics; Bayesian Methods; Mixture Models; Causal Inference and Bayesian Networks.

Hulin Wu, Professor, Associate Chair, and the Dr. D.R. Seth Family Professor in Biostatistics. BS, National University of Defense Technology, China, 1984; MS, National University of Defense Technology, China, 1987; MS, Florida State University, 1991; PhD, Florida State University, 1994.

Research Interests: Biomedical big data analytics; statistical methods and theories for differential equation models; high-dimensional data analysis and inference; computational systems biology and bioinformatics; immunological data analysis and modeling; biomathematical modeling; clinical trials; longitudinal data.

Momiao Xiong, Associate Professor. BS, Fudan University, Shanghai, 1968; MS, University of Georgia, 1990; PhD, University of Georgia, 1993.

Research Interests: Computational systems biology; functional genomics; bioinformatics; genetic epidemiology; statistical genetics; pharmacogenetics; population genetics.

Jose-Miguel Yamal, Associate Professor. BA, Rice University, 1999; MA, Rice University, 2005; PhD., Rice University, 2007.

Research Interests: Statistical learning methodology and applications; Statistical evaluation of diagnostic tests for classification; High-dimensional data mining; Early detection of disease, Optical technologies.

Hongjian Zhu, Assistant Professor. BS, Zhejiang University, China, 2005; MS, University of Virginia, 2008; PhD, University of Virginia, 2010.

Research Interests: Clinical trials, adaptive designs, sequential monitoring.

Faculty in Epidemiology

A.J. Agopian, Assistant Professor. PhD, University of Texas School of Public Health, 2010.

Research Interests: Birth defects risk factors and secondary outcomes; maternal characteristics, behaviors, and exposures; genetic epidemiology.

Justin Bahl, Associate Professor. BSc, The University of Toronto, 2001; PhD, The University of Hong Kong, 2007.

Research Interests: Ecology, Evolution and Epidemiology of Emerging Infectious Diseases; Transmission dynamics of RNA viruses; Global patterns of distribution and patterns of annual

epidemics; Inter-species transmission of potentially pandemic pathogens; Avian influenza as a virus ecology; respiratory infectious disease.

Bijal A. Balasubramanian, Interim Regional Dean, Associate Professor (Dallas Campus). MBBS, University of Pune, 1996; PhD, Rutgers-School of Public Health, 2008.

Research Interests: Primary care health services and outcomes research, specifically, integration of primary care and specialty care (cancer and behavioral/mental health care); multi-level influences on primary health care quality and patient outcomes.

Frank C. Bandiera, Assistant Professor (Dallas Campus). BA, University of Miami, 2004; MPH, University of Florida, 2007; PhD, University of Miami, 2012; Postdoc, University of California, San Francisco, 2014.

Research Interests: Tobacco control; substance use; mental health; health disparities.

Jennifer “Piper” E. Below, Assistant Professor. BA, Carleton College, 2003; PhD, University of Chicago, 2011.

Research Interests: Pedigree-based strategies for understanding genetic basis of Mendelian and complex human disease, population-specific genetic risk factors in admixed datasets, genetics of diabetes and related traits.

Eric Boerwinkle, Dean and Professor, M. David Low Chair in Public Health & Kozmetsky Family Chair in Human Genetics. BS, University of Cincinnati, 1980; MA, University of Michigan, 1984; MS, University of Michigan, 1985; PhD, University of Michigan, 1985.

Research Interests: Human genetics; bioinformatics; DNA variation; coronary heart disease; hypertension.

Jan Bressler, Assistant Professor. BS, Columbia University, 1991; PhD, Baylor College of Medicine, 2000; MPH, The University of Texas School of Public Health at Houston, 2002.

Research Interests: Disease Control, Epidemiology, Molecular Genetics, Genetic Epidemiology, Molecular Genetics.

Eric L. Brown, Associate Professor. BS, Texas A&M University, 1989; PhD, University of Texas Graduate School of Biomedical Science, 1996.

Research Interests: Immunology; infectious disease; mechanisms of immune evasion; vaccine development.

Stephen P. Daiger, Professor. BS, Johns Hopkins, 1965; PhD, Stanford University, 1975.

Research Interests: Human molecular genetics; human population genetics; medical genetics; human gene cloning; linkage mapping; retinitis pigmentosa; macular degeneration; inherited retinal diseases in humans; mutation detection; retinal disease genes RP1 and IMPDH1.

Charles Darkoh, Assistant Professor. BSc, University of Ghana, Legon, 1999; MSc, University of Bremen, Germany, 2001; MS, Stephen F. Austin State University, 2008; PhD, The University of Texas Health Science Center, 2012.

Research Interests: Molecular epidemiology of infectious diseases, bacterial pathogenesis, molecular basis of enteric infectious diseases, drug discovery, vaccine development, diagnostics, host-pathogen interactions, and metabolomics.

Rena Sue Day, Associate Professor. BS, Texas Tech University, 1977; MS, The University of Texas School of Public Health at Houston, 1982; PhD, The University of Texas School of Public Health at Houston, 1988.

Research Interests: Epidemiology; nutrition; dietary assessment methodology; obesity, cardiovascular disease; cancer; chronic disease; dietary interventions and health promotion; physical activity; Hispanic populations; children.

Xianglin L. Du, Associate Professor. MB, Anhui Medical University, 1984; MS, Anhui Medical University, 1987; PhD, University of Manchester, 1997.

Research Interests: Clinical epidemiology of cardiovascular disease and cancer; health services and outcomes research; claims-based health care studies.

Herbert L. DuPont, Professor, Mary W. Kelsey Chair, and Director of the Center for Infectious Disease (CID). AB, Ohio Wesleyan University, 1961; MD, Emory University, School of Medicine, 1965.

Research Interests: Worldwide study of the epidemiology; microbiology; genetic susceptibility, treatment and prevention of acute diarrhea.

Susan P. Fisher-Hoch, Professor (Brownsville Campus). MBBS, University of London, 1975; MS, University of London, 1978; MD, University of London, 1981.

Research Interests: Virology; Lassa and Ebola hemorrhagic fevers; tuberculosis; human Papilloma virus; biocontainment; microbiology; molecular epidemiology; public health.

Myriam Fornage, Professor, Molecular Medicine and Human Genetics; Laurence and Johanna Favrot Distinguished Professor in Cardiology. BS, Henri Poincaré University, 1989; MS, University Henri Poincaré, 1990; PhD, University of Texas Houston, 1996.

Research interests: Genetics and genomics of brain vascular disease and brain aging; epigenetic biomarkers of brain vascular disease; genetic epidemiology of stroke.

Kelley P. Gabriel, Associate Professor (Austin Campus). BS, Ithaca College, 1996; MS, Northeastern University, 1999, PhD, University of Pittsburgh.

Research Interests: Measurement of physical activity and sedentary behavior; epidemiology of physical activity and health outcomes in women across the lifespan; physical activity and non-pharmacological lifestyle interventions for prevention or management of chronic disease.

Jennifer M. Reingle Gonzalez, Assistant Professor (Dallas Campus). BS, University of North Carolina Wilmington, 2005; MS, University of Cincinnati, 2007; PhD, University of Florida, 2011.

Research Interests: Vulnerable populations, crime, health disparities, violence and aggression, violence prevention, intimate partner violence, domestic violence, innovative analytical methods, and health-related outcomes of violent and criminal behavior.

Craig L. Hanis, Professor. BS, Brigham Young University, 1974; MS, Brigham Young University, 1977; MA, University of Michigan, 1981; PhD, University of Michigan, 1981.

Research Interests: Genetic epidemiology; genetics of type 2 diabetes and its complications; genomic approaches to identifying genes for common diseases.

Melissa B. Harrell, Associate Professor (Austin Campus). BS, College of William and Mary, 1991; MPH, University of Minnesota School of Public Health, 1999; PhD, University of Minnesota School of Public Health, 2003.

Research Interests: Child and adolescent health; global/international health, with special emphasis on India; tobacco prevention and cessation; obesity prevention; behavioral epidemiology.

John R. Herbold, Associate Professor (San Antonio Campus). BS, Texas A&M University, 1968; DVM, Texas A&M University, 1969; MPH, University of North Carolina, 1973; PhD, Ohio State University, 1981.

Research Interests: Epidemiology; environmental health; infectious disease; animal-human issues; military medicine.

James Hixson, Professor. BA, The University of Texas at Austin, 1978; MS, University of Michigan, 1980; PhD, University of Michigan, 1983.

Research Interests: Molecular genetics of common diseases including cardiovascular disease, obesity, and diabetes; SNP discovery and analysis in population-based studies of common diseases; allelic effects on gene expression and protein function related to common diseases and measured risk factors.

Lu-Yu Hwang, Professor. MBBS, National Taiwan University, 1975.

Research Interests: Pediatrics; infectious disease; perinatal transmission; viral epidemiology; cancer epidemiology; hepatitis virus/liver cancer; HIV/AIDS, HTLV/leukemia; EBV/nasopharyngeal cancer; viral oncology.

Zhi-Dong Jiang, Associate Professor. MD, Beijing Medical University, 1983; MPH, University of Texas School of Public Health-Houston, 1994; DrPH, University of Texas School of Public Health-Houston, 1998.

Research interests: Epidemiology of travelers' diarrhea; genetic factors for acute diarrhea; enteric pathogens.

Eric C. Jones, Assistant Professor (El Paso Campus). BA, Hamline University, 1992; PhD, University of Georgia, 2002.

Research Interests: Disasters, trauma-related wellbeing, health in extreme events, inequality, collective action, social networks.

Goo Jun, Assistant Professor. BS Korea Advanced Institute of Science and Technology, 1997; MS, University of Michigan at Ann Arbor, 1999; PhD, The University of Texas at Austin, 2010.

Research Interests: Statistical genetics; Analysis of large-scale genomic data; Computational biology and bioinformatics; Genetics of common and complex traits.

Steven H. Kelder, Professor and Associate Regional Dean, Beth Toby Grossman Distinguished Professor of Spirituality and Healing (Austin Campus). BS, Northern Illinois University, 1981; MPH, University of Minnesota, 1988; PhD, University of Minnesota, 1992.

Research Interests: Epidemiology of child and adolescent health; design and evaluation of school health promotion programs, particular emphasis on obesity, diet, physical activity, and substance use.

Harold W. (Bill) Kohl, III, Professor and Associate Regional Dean of Global Health (Austin Campus). BA, University of San Diego 1982; MSPH, University of South Carolina 1984; PhD, The University of Texas School of Public Health at Houston, 1993.

Research interests: Epidemiology, physical activity and public health, development of physical activity national guidelines; physical activity for chronic disease prevention.

Xiaoming Liu, Assistant Professor. BS, Fudan University, Shanghai, China, 1997; MS, Fudan University, Shanghai, China, 2000; PhD, Graduate School of Biomedical Sciences, University of Texas, 2006.

Research Interests: theoretical population genetics; sequence-based gene mapping of complex human diseases; molecular evolution of pathogens.

David S. Lopez, Assistant Professor. BS, University of Texas at El Paso, 1998; MS, University of Texas at El Paso, 2000; MPH, University of Texas School of Public Health, 2004; DrPH, University of Texas School of Public Health, 2007.

Research Interests: Cancer health disparities; hormone-related cancers; sex steroid hormones; genitourinary system; cancer survivorship research.

Joseph B. McCormick, Regional Dean and James H. Steele Professor (Brownsville Campus). BS, Florida Southern College, 1964; MS, Harvard, 1970; MD, Duke University Medical School, 1971.

Research Interests: Infectious Diseases (particularly viral such as Ebola; Lassa fever; HIV/AIDS), Health issues in international settings; vaccines; epidemiology and bioterrorism.

Laura E. Mitchell, Professor. BS, State University of New York at Stony Brook, 1983; MS, The University of Pittsburgh, 1985; PhD, Yale University, 1991.

Research Interests: Epidemiology and genetic epidemiology of structural birth defects; role of the maternal genotype in determining offspring phenotype.

Alanna C. Morrison, Professor and Department Chair. BS, University of Michigan, 1996; PhD, The University of Texas School of Public Health at Houston, 2001.

Research Interests: Elucidation of genes involved in complex diseases such as cardiovascular disease, hypertension and stroke. Identifying single nucleotide polymorphisms influencing inter-individual disease risk, linkage analyses and association studies, and development and application of novel statistical methods to evaluate genetic data.

Roberta B. Ness, Professor, James W. Rockwell Professorship in Public Health. BSc, University of Maryland, Honors College, 1980; MD, Cornell University, 1984; MPH, Columbia University School of Public Health, 1989.

Research Interests: Epidemiology of women's health, specifically, etiology and treatment of ovarian cancer, preeclampsia, and pelvic inflammatory disease; adverse pregnancy and perinatal outcomes; links between reproductive history and cardiovascular disease; bacterial sexually transmitted infections.

Alan G. Nyitray, Assistant Professor. BS, Oklahoma State University, 1984; MS, Oklahoma State University, 1988; PhD, The University of Arizona, 2008.

Research Interests: The natural history of anal human papillomavirus (HPV), screening for HPV-associated cancers including anal cancer, and delivery of HPV vaccination to populations at increased risk for HPV and Human immunodeficiency virus disease.

Theresa J. Ochoa, Assistant Professor. MD, Universidad Peruana Cayetano Heredia, Lima, Peru, 1997; Pediatrics, Universidad Peruana Cayetano Heredia, Lima, Peru, 2001; Pediatric Infectious Diseases, University of Texas School of Medicine, Houston, TX, 2004.

Research Interests: Pediatric diarrhea; pathophysiology of enteric pathogens; diarrheagenic E. coli; respiratory infections.

Marcia C de Oliveira Otto, Assistant Professor. BS, University of Rio de Janeiro, 2002; MS, University of Sao Paulo, Brazil 2005; PhD, The University of Texas School of Public Health at Houston, 2010.

Research Interests: Effects of different aspects of diet and diet quality on cardiovascular, metabolic and mental health, especially in understudied populations.

Linda Piller, Associate Professor. BS, University of Houston, 1975; MPH, The University of Texas School of Public Health at Houston, 1979; MD, The University of Texas Medical School at Houston, 1986.

Research Interests: Hypertension; ischemic heart disease; coronary heart disease; clinical trials; cardiovascular clinical trials; endpoint reporting in clinical trials; safety in clinical trials; congestive heart failure; cardiovascular pathology; cervical pathology; breast pathology.

Lisa A. Pompeii, Associate Professor. BSN, The University of Cincinnati, 1989; MS, The University of North Carolina at Chapel Hill, 1995; PhD, The University of North Carolina at Chapel Hill, 2002.

Research Interests: Occupational epidemiology, workplace violence, occupational and non-occupational injury.

Hui-Qi Qu, Assistant Professor. MB, Tianjin Medical University, 1994; MSc, Tianjin Medical University, 1999; PhD, Tianjin Medical University, 2002.

Research Interests: Human genetics; diabetes; tuberculosis; translational research.

M. Hossein Rahbar, Professor. BS, Shiraz University, 1978; MS, Shiraz University, 1980; PhD, Michigan State University, 1988.

Research Interests: Clinical Trials; Survival Analysis; Statistical and Study Design Issues in Epidemiology; Autism Spectrum Disorders; Developmental Disabilities; Global Health; Environmental Health with a focus on Toxic and Heavy Metals; Gene-Environment Interactions in relation to Autism; Data Mining; Sequential Procedures; Cost-Effectiveness Analysis; Stroke; Massive Transfusion.

Blanca I. Restrepo, Associate Professor (Brownsville Campus). BS, Colegio Mayor de Antioquia, 1986; PhD, The University of Texas Health Science Center at San Antonio, 1994.

Research Interests: Tuberculosis; pathogenesis, early disease detection, host immune response, dynamics of transmission in the Texas-Mexico border. Neurocysticercosis: host-parasite interactions, immune response, granuloma formation.

Jennifer J. Salinas, Assistant Professor (El Paso Campus). BA, University of Massachusetts at Amherst, 1993; MSW, University of Pennsylvania, 1995; PhD, University of Texas at Austin, 2006.

Research Interests: Social epidemiology and health disparities; Mexican American health; demography and aging.

Beatrice J. Selwyn, Associate Professor. BS, Vanderbilt University, 1964; MS, Tulane University, 1970; ScD, Tulane University, 1974.

Research Interests: Perinatal and pediatric epidemiology; international health; health survey methodology; rapid epidemiologic assessment methods; studies of the future of public health.

Shreela V. Sharma, Associate Professor. BS, University of Bombay, 1996; MA, University of Iowa, 1999; PhD, The University of Texas School of Public Health at Houston, 2005.

Research Interests: Health promotion and health education of obesity, type 2 diabetes, and cardiovascular disease in children and adolescents; nutritional and physical activity epidemiology to prevent and treat obesity and cardiovascular diseases; design and evaluation of dietary intake and physical activity behaviors.

Elaine Symanski, Professor. BS, Western Washington University, 1981; MSPH, University of North Carolina at Chapel Hill, 1992; PhD, University of North Carolina at Chapel Hill, 1996.

Research Interests: Development of quantitative methods for modeling occupational and environmental exposures; retrospective exposure assessment for workplace contaminants; investigation of health effects related to occupational and environmental exposures.

Kim Waller, Associate Professor. BA, University of California at Santa Cruz, 1975; BS, University of California at San Francisco, 1979; MPH, University of California at Berkeley, 1986; PhD, University of California at Berkeley, 1991.

Research Interests: Preventable risk factors for birth defects; low birth weight; fetal death; birth defects; screening programs; association of serum biomarkers (measured early in pregnancy) and pregnancy outcome.

Anna V. Wilkinson, Associate Professor. BSc, London School of Economics and Political Science, 1988; PhD, The University of Texas at Austin, 1996.

Research Interests: Health disparities and immigrant health; tobacco prevention and cessation; promotion of physical activity and obesity prevention; bio-behavioral epidemiology.

Bing Yu, Assistant Professor. BM, Fudan University, China 2003; MS, Fudan University, China 2008; PhD, The University of Texas Health Science Center at Houston, 2013.

Research Interests: Cardiovascular epidemiology, Molecular epidemiology, genomics, metabolomics.

Faculty in Environmental and Occupational Health Sciences

Arch I. Carson, Associate Professor. BS, University of Cincinnati, 1973; PhD (Environmental Health – Toxicology), Kettering Laboratory, University of Cincinnati College of Medicine, Cincinnati, OH, 1987; MD, Ohio State University College of Medicine, Columbus OH, 1990.

Research Interests: Occupational lung disease; industrial toxicology; international occupational health; occupational health surveillance systems; occupational medicine professional training.

Cynthia L. Chappell, Professor. BS, Middle Tennessee State University, 1971; MS, Middle Tennessee State University, 1976; PhD, Baylor College of Medicine, 1985.

Research Interests: Parasitology; gastrointestinal parasites (esp. Cryptosporidium); immune response to parasites; adenovirus 36 infection and diagnostic assay.

Sadie H. Conway, Assistant Professor. BA, Vanderbilt University, 1996; MA, Syracuse University, 2002; PhD, The University of Texas Health Science Center, 2015.

Research Interests: Occupational epidemiology, work hour patterns, cardiovascular disease, occupational injury.

George L. Delclos, Distinguished Teaching Professor. MD, University of Barcelona, 1981; MPH, The University of Texas School of Public Health at Houston, 1988; PhD, Pompeu Fabra University 2007.

Research Interests: Occupational hazards of healthcare workers; occupational and environmental respiratory disease; international aspects of occupational health; national surveys of working conditions and health; disability management.

George D. Di Giovanni, Professor (El Paso Campus). BS *cum laude*, The University of Arizona, 1990; PhD, The University of Arizona, 1994.

Research Interests: Waterborne pathogens, bacterial source tracking, and environmental microbiology.

David I. Douphrate, Assistant Professor (San Antonio Campus). BS, Texas A&M University, 1992; BS, The University of Texas Medical Branch at Galveston, 1993; MPT, The University of Texas Medical Branch at Galveston, 1995; MBA, University of Mary Hardin-Baylor, 2003; PhD, Colorado State University, 2008.

Research Interests: Occupational ergonomics and safety; cause and prevention of work-related musculoskeletal disorders; occupational health management; incorporation of occupational health and safety into business practice.

Robert J. Emery, Professor. BA, University of North Carolina, Wilmington, 1979; MS, University of North Carolina at Chapel Hill, 1989; MS, East Carolina University, 1991; DrPH, The University of Texas School of Public Health at Houston, 1997.

Research Interests: Comprehensive approaches to health and safety; health and safety program outcome measures; health and safety for special populations; occupational radiation protection; hazardous waste management; emergency preparedness and response, training.

David Gimeno Ruiz de Porras, Professor (San Antonio Campus). BA and MA, Universitat de Barcelona, Barcelona, Catalonia (Spain), 1997; MS, Universitat de Barcelona and Universitat Pompeu Fabra, Barcelona, Catalonia (Spain), 1999; PhD, Universitat Pompeu Fabra, Barcelona, Catalonia (Spain), 2003.

Research Interests: Occupational and social epidemiology; employment status, work organization and health; work stress; health-related productivity; social inequalities in health and aging; applied multilevel statistical models; cross-national epidemiological studies.

Inkyu Han, Assistant Professor. BS, Hankuk University of Foreign Studies, Korea, 1997; MPH, Seoul National University School of Public Health, Korea, 1999; PhD, University of Medicine and Dentistry of New Jersey, 2008.

Research Interests: Exposure measurement and assessment, characterization of outdoor and indoor air quality, environmental chemistry, biomarkers of exposure, biosensors.

Kristina D. Mena, Interim Regional Dean and Associate Professor (El Paso Campus). BA, Franklin College, 1991; MSPH, University of South Florida, 1993; PhD, The University of Arizona, 1996.

Research Interests: Water quality, food safety, human health risk assessment.

William "Brett" Perkison, Assistant Professor. BS, Texas A&M University, 1989; MD, University of Texas Medical Branch, 1994; Family Medicine Residency, Baylor College of Medicine, 2000; MPH, University of Texas School of Public Health Houston 2003; Occupational Medicine Residency, University of Texas School of Public Health, 2003

Research Interests: Improving health outcomes in chronic disease management - specifically asthma and diabetes, impact of chronic diseases on occupational injuries, illnesses and workplace productivity

Roberto Rodriguez, Assistant Professor (El Paso Campus). BS, University of Puerto Rico, Humacao, 1997; MS, University of Puerto Rico, Rio Piedras, 2003; PhD, The University of Arizona, 2007.

Research Interests: Biology of microorganisms in the environment, and interaction of water quality with human activities.

Mary Ann Smith, Assistant Professor and Assistant Dean of Students. BS, The University of Texas at Austin, 1979; PhD, The University of Texas at Austin, 1984.

Research Interests: Cellular and molecular mechanisms of nephrotoxicity; in-vitro toxicology; environmental justice.

Thomas H. Stock, Associate Professor. BS, Villanova University, 1968; MS, Cornell University, 1972; PhD, Cornell University, 1977; MPH, The University of Texas School of Public Health at Houston, 1979.

Research Interests: Assessment of community and occupational pollutant exposures; characterization of major determinants of indoor and outdoor air quality; evaluation of air monitoring and industrial hygiene methods.

Lawrence W. Whitehead, Associate Professor. BA, BArch, Rice University, 1971; MPH, The University of Texas School of Public Health at Houston, 1972; MArch, Rice University, 1973; PhD, The University of Texas School of Public Health at Houston, 1976.

Research Interests: Exposure assessment; occupational epidemiology; environmental health; industrial noise; demography of occupational health professions; bilingual resources for occupational health education and practice.

Kristina Walker Whitworth, Assistant Professor. BS, Texas A&M University, 2002; MSPH, Texas A&M Health Science Center School of Public Health, 2004; PhD, The University of Texas Health Science Center at Houston School of Public Health, 2009. *Research Interests:* Environmental epidemiology, biomarkers of environmental exposure, reproductive and perinatal health outcomes.

Kai Zhang, Assistant Professor. BS, Southeast University, 1998; MS, Tsinghua University, 2002; MA, University of Michigan, Ann Arbor, 2009; PhD, University of Michigan, Ann Arbor, 2010.

Research Interests: Climate change, extreme weather events and health; air quality, transportation and health; exposure science; environmental epidemiology; risk assessment; environmental statistics and modeling; environmental health in China.

Faculty in Health Promotion and Behavioral Sciences

Marlyn Allicock, Assistant Professor (Dallas Campus). BA, Trinity University, 1996; MPH, The University of North Carolina at Chapel Hill, 2000; PhD, The University of North Carolina at Chapel Hill, 2006.

Research Interests: Cancer prevention and control, health disparities, health communication, peer support, dissemination research, intervention development and program evaluation.

Louis Brown, Assistant Professor (El Paso Campus). BA, University of Michigan, 2001; MA, Wichita State University, 2004; PhD, Wichita State University, 2005;

Research Interests: Community coalitions, self-help and mutual support, substance abuse prevention, parenting, mental illness, implementation science, program engagement.

Jason Burnett, Assistant Professor. BS, Tarleton State University, 2001; MS, The University of Louisiana at Monroe, 2003; PhD, The University of Texas School of Public Health at Houston, 2012.

Research Interests: Neglect, exploitation and maltreatment of older adults (primary and secondary intervention development); Self-Management deficits in community-dwelling older adults living with chronic illnesses- (intersecting issues of polypharmacy, medication regimen complexity, cognition, adverse events, medication adherence and quality of life); implementing medical technology for improved quality of care for community-dwelling older adults and caregivers.

Courtney E. Byrd-Williams, Assistant Professor of Health Promotion and Behavioral Sciences (Austin Campus). BA, University of Texas at Austin, 1999; PhD, University of Southern California, 2009.

Research Interests: Determinants of eating and physical activity behaviors of infants, toddlers, preschoolers, children, adolescents, and their families; effects of nutrition and physical activity interventions on behavioral constructs, body composition, and metabolic profiles in youth.

Paula Cuccaro, Assistant Professor. BA, State University of New York at Buffalo, 1986; MA, University of Houston, 1990; PhD, University of Houston, 1996.

Research Interests: Child and adolescent health, with a focus on vulnerable populations (foster care, aging out of care, incarcerated, homeless), cognitive development, mental health, poverty, youth violence, parent and family factors and cancer prevention, primarily HPV.

Pamela M. Diamond, Associate Professor. BA, Carnegie Mellon University, 1967; MA, Texas Woman's University, 1986; PhD, The University of Texas at Austin, 1992.

Research Interests: Interface between criminal justice and mental health policy, psychiatric epidemiology, community reintegration for female offenders, and the use of latent variable models in public health research.

Casey P. Durand, Assistant Professor. BA, The University of Texas at Austin, 2006; MPH, The University of Texas School of Public Health at Houston, 2008; PhD, University of Southern California, 2012.

Research Interests: Effects of the built environment and public policy on physical activity, diet and obesity; health disparities; statistical methods and programming.

Susan Emery, Professor and Senior Associate Dean of Academic and Research Affairs. BS, University of Houston, 1985; MS, The University of Texas School of Public Health at Houston, 1989; PhD, The University of Texas School of Public Health at Houston, 1994.

Research Interests: Adolescence; children; sexual-risk taking behavior, STDs, pregnancy, substance use, violence mental health; depression; Hispanics; prevention research.

Alexandra E. Evans, Associate Professor (Austin Campus). BS, Texas A&M University, 1988; MPH, The University of Texas School of Public Health at Houston, 1990; PhD, The University of Texas at Austin, 1997.

Research Interests: Health disparities; Development and evaluation of interventions increasing access to healthful foods; School-garden interventions; Sustainable food systems, health disparities; Child obesity prevention through environmental and policy strategies; Community-based Participatory Research.

Maria E. Fernandez, Professor. Director, Center for Health Promotion and Prevention Research. BA, University of Maryland, 1989; BS, University of Maryland, 1989; MA, University of Maryland, 1992; PhD, University of Maryland, 1995.

Research Interests: Cancer control, Hispanic populations, informed decision-making health promotion planning and evaluation, health informatics, health communications, breast, colorectal, and cervical Cancer screening, HPV vaccination, dissemination and implementation research.

Maria E. Fernandez-Esquer, Associate Professor. A.A., Marymount College of Virginia, 1977; BA, Loyola University-New Orleans, 1979; MA, University of Arizona, 1986; PhD, University of Arizona, 1989.

Research Interests: Health inequities among marginalized populations including injury and substance abuse prevention among Latino day laborers, cancer prevention among Vietnamese nail salon workers; CBPR methodology and communication strategies; influence of stress, discrimination and stigma on health risk behaviors of ethnic minorities.

Kayo Fujimoto, Associate Professor. BA, Kyoritsu Women's University, Japan, 1993; MA, University of Chicago, 1998; MS, University of Pittsburgh, 2003; PhD, University of Pittsburgh, 2003.

Research Interests: Social network analysis, HIV/AIDS research; MSM population; adolescent substance abuse; adolescent health behavior; community research; organization studies; molecular epidemiology; categorical data analysis; agent-based modeling.

Belinda F. Hernandez, Assistant Professor (San Antonio Campus). BS, St. Mary's University, 2003; MPH, The University of Texas School of Public Health, 2006; PhD, The University of Texas School of Public Health, 2012.

Research Interests: Adolescent health; STD, HIV, and unintended pregnancy prevention; the influence of parental factors on adolescent risk behaviors; sexual violence prevention; intervention development, evaluation, and dissemination; Hispanic populations; and military families.

Deanna M. Hoelscher, John P. McGovern Professor in Health Promotion (Austin Campus). BS, Texas A&M University, 1983; MA, The University of Texas at Austin, 1985; PhD, The University of Texas at Austin, 1991.

Research Interests: Design, implementation and evaluation of nutrition and physical activity programs for preschool children, elementary school children and adolescents; healthy eating and active living interventions for parents; coordinating primary care and public health approaches for child obesity prevention and weight maintenance; evaluation of nutrition and physical activity environments; evaluation of child obesity legislative policies; development

and evaluation of dietary intake and physical activity assessment methods; prevention of chronic disease (cardiovascular disease, type 2 diabetes, obesity, osteoporosis); dissemination of health promotion programs for children and families; gene-diet interactions; epidemiologic studies of child obesity, diet, physical activity, and behavioral risk factors.

Christine M. Markham, Associate Professor and Associate Department Chair. BA, Temple University, 1985; MA, University of Pennsylvania, 1990; PhD, The University of Texas School of Public Health at Houston, 2002.

Research Interests: Adolescent and child health, including HIV, STD and pregnancy prevention, substance use prevention, chronic disease management, influence of parental factors, qualitative research, outcome, and process evaluation.

Alfred L. McAlister, Professor (Austin Campus). BS, University of Texas at Austin, 1972; PhD, Stanford University 1976.

Research Interests: Reducing disparities in Latino and African American health; cross-cultural communication; new media for promoting health behavior and “grass-roots” policy advocacy; tobacco and alcohol abuse; homicide and firearms; “war fever” in international conflict.

Sheryl A. McCurdy, Associate Professor. BA, University of Minnesota-Twin Cities, 1985; MA, University of Dar es Salaam, 1987; MPhil, Columbia University, 1992; PhD, Columbia University, 2000.

Research Interests: Harm reduction; substance abuse; HIV/AIDS; vulnerable populations; the Ethical, Legal, and Social Implications (ELSI) of genomic and human microbiome research; East Africa; global health.

Patricia Dolan Mullen, Distinguished Teaching Professor. AB, University of California at Berkeley, 1966; MLS, University of California at Berkeley, 1970; MPH, University of California at Berkeley, 1971; DrPH, University of California at Berkeley, 1975; The Johns Hopkins School of Public Health, postdoctoral fellowship, 1979.

Research Interests: Finding, selecting, adapting, and implementing evidence-based interventions; training and career development programs for doctoral students and post-doctoral fellows; systematic review and meta-analysis; preventing alcohol, tobacco and obesity-exposed pregnancies; promoting smoke-free homes; and informed decision making for controversial cancer screening tests/overtreatment.

Cheryl L. Perry, Regional Dean and Professor (Austin Campus). BA, University of California at Los Angeles, 1971; MA, University of California at Davis, 1973; PhD, Stanford University, 1980.

Research Interests: Child and adolescent health behavior change through school, family, and community interventions, with a focus on promoting healthy eating and physical activity, and preventing tobacco, alcohol, and other drug use and violence among young people; school-based peer, family, and community programs, including local, state, and national policy changes for tobacco use among youth.

Melissa F. Peskin, Associate Professor. BA, The University of Texas at Austin, 1997; MS, The University of Texas School of Public Health at Houston, 2000; PhD, The University of Texas School of Public Health at Houston, 2004.

Research Interests: Child and adolescent health, specifically in HIV, STD, and pregnancy prevention, dating violence, bullying; intervention development and program evaluation; dissemination of evidence-based programs.

Nalini Ranjit, Associate Professor (Austin Campus). MS, State University of New York, 1992; MS, Cornell University, 1993; PhD, Cornell University, 1999.

Research Interests: Socioeconomic and racial disparities in health outcomes and health behaviors; epidemiology of childhood obesity; evaluation science and methods; research design for behavioral interventions; chronic disease epidemiology; statistical methods for complex processes.

Belinda Reininger, Professor (Brownsville Campus). BS, The University of Texas at Austin, 1988; MPH, The University of Texas School of Public Health at Houston, 1991; DrPH, The University of Texas School of Public Health at Houston, 1994.

Research Interests: Community-based participatory research, health disparities, intervention and evaluation research based on ecological models, chronic disease prevention and management, use of technology to support health promotion.

Robert E. Roberts, Professor. BA, Texas A&M University, 1962; BS, Texas A&M University, 1962; MA, University of Kentucky, 1963; PhD, University of Kentucky, 1968.

Research Interests: Cross-cultural research; psychiatric epidemiology; adolescent mental health; affective disorders; suicide, sleep disorders, obesity, and mental health.

Angelica M. Roncancio, Assistant Professor. BS, University of Houston, 2001; MA, University of Houston, 2005; PhD, University of Houston, 2008.

Research Interests: Health disparities; women's health; cancer prevention; role of culture in health behavior; use of technology in intervention delivery; development of theory-based interventions.

Lara Savas, Assistant Professor. BA, Tufts University, 1994; MS, University of Texas School of Public Health, 2000; PhD, University of Texas School of Public Health, 2006. *Research Interests:* Reducing health disparities, cancer epidemiology, cancer prevention and control (breast/cervical/colorectal), interventions to increase cancer screening in vulnerable populations, lay health worker (*promotora*) model.

Ross Shegog, Associate Professor. BS, University of Sydney, 1983; Diploma in Nutrition and Dietetics, University of Sydney, 1985; Diploma in Biomedical Communications, University of Texas, 1990; MPH, The University of Texas School of Public Health at Houston, 1992; PhD, The University of Texas School of Public Health at Houston, 1997.

Research Interests: Application of instructional and/or decision-support technology in health promotion and disease prevention including pediatric asthma management; prevention and cessation of adolescent and young adult tobacco use; prevention of HIV, STD, and pregnancy in middle school children.

Andrew E. Springer, Associate Professor (Austin Campus). BA, Wittenberg University, 1985; MPH, The University of Texas School of Public Health at Houston, 1995; DrPH, The University of Texas School of Public Health at Houston, 2000.

Research Interests: Child and adolescent health promotion; childhood obesity prevention and physical activity; socio-ecological influences of adolescent health behavior; epidemiology and health promotion of child and adolescent health behaviors in Latino populations.

Wendell C. Taylor, Associate Professor. AB, Grinnell College, 1972; MS, Eastern Washington University, 1974; PhD, Arizona State University, 1984; MPH, The University of Texas School of Public Health at Houston, 1989.

Research Interests: Workplace health promotion; Physical activity; Sedentary behavior; Health disparities.

Melissa A. Valerio, Regional Dean and Associate Professor (San Antonio Campus). BA, University of Texas at Austin, 1997; MPH, University of Michigan School of Public Health, 2001; PhD, The University of Michigan, 2006.

Research Interests: Chronic disease prevention and management, asthma, type 2 diabetes, and cardiovascular disease; functional health literacy; patient provider communication, community-based participatory research approaches; survey methods.

Elizabeth Vandewater, Associate Professor (Austin Campus). BA, Boston University, 1986; MA, University of Michigan, 1990; PhD, University of Michigan, 1994.

Research Interests: Developmental epidemiology of obesity and chronic disease among children and adolescents; Uses of technology and bioinformatics for health behavior change; Statistical and methodological approaches for addressing multi-level change overtime and high-resolution data.

J. Michael Wilkerson, Jr., Assistant Professor. BBA, Baylor University, 1993; MEd, Baylor University, 1995; PhD, Texas State University-San Marcos, 2007; MPH, University of Minnesota, 2010.

Research Interests: HIV/STI prevention, substance use, LGBT health disparities, mobile health (mHealth), Internet-based methods research.

Sally W. Vernon, Professor and Department Chair. BA, University of Oklahoma, 1968; MA, New York University, 1971; PhD, The University of Texas School of Public Health at Houston, 1980.

Research Interests: Cancer prevention and control for breast, cervical and colorectal cancers; HPV vaccination; informed decision making for prostate cancer testing; psychosocial issues in cancer genetic testing; measurement of psychosocial constructs; reliability and validity of self-report cancer screening behaviors.

Faculty in Management, Policy and Community Health

Ajit Appari, Assistant Professor. BTech, National Institute of Technology Calicut (India), 1993; MTech, Indian Statistical Institute (India), 1996; PhD, Syracuse University, 2008.

Research Interests: Economics of Health Information Technology; Economics of Health Care Delivery; Organizational Behavior; Health Information Privacy and Security; Healthcare Market Structure.

Dennis Andrulis, Associate Professor (Austin Campus). BS, Fordham University, 1969; MPH, University of North Carolina at Chapel Hill, 1976; PhD, University of Texas at Austin.

Research Interests: Racial/ethnic disparities in health and health care; health care policy, health care reform and addressing the needs of culturally diverse and vulnerable populations; integrating racially and ethnically diverse communities into public health emergency preparedness.

Charles E. Begley, Professor. BS, Northern Arizona University, 1969; MA, The University of Texas at Austin, 1972; PhD, The University of Texas at Austin, 1978.

Research Interests: Economic evaluation of health policy and programs particularly regarding Medicaid, Medicare, state and local safety net, neurological diseases, and breast cancer.

Jose Betancourt, Associate Professor (San Antonio Campus). BS, University of Florida, 1985; MS, Troy State University, 1990; MS, Defense Intelligence College -- Bolling Air Force Base, 1993; DrPH, George Washington University, 2003; MS, United States Army War College, 2006. *Research Interests:* Infectious disease surveillance; Tele-Behavioral Health; Surveillance of Behavioral Health Indicators; Military Medicine; Global Health; Health of Displaced Populations.

Tajudaullah (Taj) Bhaloo, Assistant Professor. BA, Oberlin College, 1995; MHA, The University of British Columbia, 1999; PhD, The University of Texas at Houston, 2011. *Research Interests:* Older adult health, care transitions, chronic disease management, medical homes, quality of care in nursing homes, primary care.

H. Shelton Brown, III, Associate Professor (Austin Campus). BA, University of North Carolina at Chapel Hill, 1988; MA, Johns Hopkins University, 1992; PhD, Vanderbilt University, 1998. *Research Interests:* Effects of and demand for health insurance; immigrants and minority groups; health economics; economic evaluation of public health interventions; productivity costs of chronic illness; urban economics; managed care; insurance demand.

Cecilia M. Ganduglia Cazaban, Assistant Professor. MD, Universidad del Salvador, Argentina, 2003; MPH, Harvard School of Public Health, 2009; DrPH, The University of Texas School of Public Health at Houston, 2012. *Research Interests:* Healthcare delivery, healthcare quality, claims data in healthcare research and health disparities.

Rigoberto Delgado, Assistant Professor. BSc, University of Chihuahua, 1983; MBA, University of California Berkeley, 1993; PhD, The University of Texas School of Public Health at Houston, 2004. *Research Interests:* Health Services Research, Management and Performance Improvement in Healthcare, Cost-effectiveness Methods, Management Economics.

Carol A. Galeener, Assistant Professor. BA, Caldwell College, 1965; MS, NJ Institute of Technology, 1976; MPH, The University of Texas Health Science Center School of Public Health, 1996; PhD, The University of Texas Health Science Center School of Public Health, 2004. *Research Interests:* Unintended consequences of policy, decision-making in the public health context.

Gretchen Gemeinhardt, Associate Professor. BA, Hamilton College, 1985; MBA, University of Houston, 1996; PhD, University of Houston, 1997. Fellow in American College of Healthcare Executives. *Research Interests:* Strategic planning, impact of policies on access, cost and quality of care, women in management, developing healthcare leaders, physician-nurse communications, power and influence.

Paula E. Stigler Granados, Assistant Professor (San Antonio Campus). BA, The University of Texas at Austin, 1998; MSPH, San Diego State University, 2009; PhD, University of California-San Diego and San Diego State University, 2013. *Research Interests:* Global environmental health; water and sanitation in rural communities; indigenous community health.

Linda Highfield, Assistant Professor. BS, Arizona State University, 2001; PhD, Texas A&M University, 2008; MS, Texas A&M University, 2004.

Research Interests: Spatial analysis, translational sciences, breast cancer disparities, community practice.

Nuria Homedes, Associate Professor (El Paso Campus). MD, Autonomous University of Barcelona, 1979; DrPH, The University of Texas School of Public Health at Houston, 1990.

Research Interests: Latin American Health Systems, Health Reform, Pharmaceutical Policies, Clinical Trials and Ethics, Global Health, Human Rights, US-Mexico Border Health.

Trudy Millard Krause, Associate Professor. BS, University of Minnesota, 1976; MBA, Louisiana State University, 1986; DrPH, University of Texas School of Public Health, 1995.

Research Interests: Health Outcomes, Quality Outcomes, Standards of Care, Health Status and Prevention, Occupational Health, Behavioral Health.

David R. Lairson, Professor. BBA, University of Kentucky, 1970; MA, University of Kentucky, 1971; PhD, University of Kentucky, 1975.

Research Interests: Health care economics; economics of health promotion/disease prevention with special interest in cancer; economic evaluation of health care technology.

Stephen H. Linder, Distinguished Teaching Professor. BA, University of Massachusetts, 1972; MA, University of Iowa, 1973; PhD, University of Iowa, 1976.

Research Interests: Policy studies; social theory; media studies; climate change and health.

Osama I. Mikhail, Professor. BSc, American University of Beirut, 1968; MBA, Wharton School, University of Pennsylvania, 1970; MS, Carnegie-Mellon University, 1972; PhD, Carnegie-Mellon University, 1975.

Research Interests: Hospital industry structure; strategic planning; healthcare finance; governance; technology assessment.

Robert O. Morgan, Professor and Department Chair. BA, University of Texas at Austin, 1975; PhD, University of Texas at Austin, 1983.

Research Interests: Access to care, patient knowledge, Health System Design and Policy and Measurement Issues in Health Services Research.

Suja S. Rajan, Associate Professor. BS, Birla Institute of Technology and Science 2001; MHA, Ohio State University, 2003; MS, University of North Carolina at Chapel Hill, 2007; PhD, University of North Carolina at Chapel Hill, 2009.

Research Interests: Health Economics, Econometrics, Economic Evaluation and Cost Analysis, Comparative Effectiveness Research, Women's Health, Cancer Research, Health Disparities.

Lee Revere, Associate Professor. BIE, Georgia Institute of Technology, 1992; MHA, Trinity University, 1997; PhD, University of South Florida, 2002.

Research Interests: Management of healthcare delivery systems, managed care/ insurance benefit design, process improvement, operational quality, price transparency and consumer behavior.

Paul Rowan, Associate Professor. BA, University of Texas at Austin, 1987; MEd, University of Houston, 1993; MA, University of Alabama, 1998; MPH, University of Alabama at Birmingham, 2002; PhD, University of Alabama.

Research Interests: Influence of psychological factors upon health care outcomes; organization of health care systems for detecting and treating psychological difficulties.

Vanessa Schick, Assistant Professor. BA, University of Massachusetts, 2004; PhD, The George Washington University, 2010.

Research Interests: Research primarily focuses on women's sexual health with a specific focus on sexual behavior between women. Health and wellness of behaviorally bisexual women and the overall health of the lesbian, gay, bisexual and transgender (LGBT) community.

Lynn Schroth, Professor. Northwest Texas Hospital School of Nursing, 1971; BS, University of Texas Medical Branch, Galveston, 1980; MS, University of Texas, Houston, 1981; DrPH, University of Texas School of Public Health, Houston, 1992; PhD, University of Texas School of Public Health, Houston, 1996.

Research Interests: Hospital operations and academic leadership.

J. Michael Swint, George McMillan Fleming Professor. BA, California State University, 1968; MA, Rice University, 1970; PhD, Rice University, 1972.

Research Interests: Economic evaluation of public health and health care interventions and health care policy alternatives; comparative health care systems; health care system reform; health and economic development.

Catherine L. Troisi, Associate Professor. BA, University of Rochester; MS, Michigan State University; PhD, University of Michigan.

Research Interests: Epidemiology of infectious diseases, particularly viral hepatitis and HIV, infectious causes of cancer, leadership studies, homelessness, public health practice, workforce development.

Ellerie Weber, Assistant Professor. BSc, London School of Economics, 1999; MBA, University of Chicago, 2008; PhD, University of Chicago, 2009.

Research Interests: Health economics; industrial organization of healthcare markets; healthcare finance; medical-decision making; consumer choice and welfare analysis.

Rebecca Wells, Professor. BA, Princeton University 1988; MHS, University of Michigan 1998; PhD, University of Michigan 1999.

Research interests: How people work together within and across human service organizations.

Paige Padgett Wermuth, Assistant Professor. BA, University of Houston, 1992; MA, University of Houston, 1996; MPH, The University of Texas School of Public Health at Houston, 1999; PhD, The University of Texas School of Public Health at Houston, 2003.

Research Interests: HIV/AIDS and sexually transmitted infections; online research and social media; sexual behavior; anthropology; transgender issues.

UTHealth School of Public Health Faculty Emeritus**Dean Emeritus**

Guy S. Parcel, PhD (2013)

Biostatistics

Ralph F. Frankowski, PhD (2014)

Robert J. Hardy, PhD (2014)

C. Morton Hawkins, MPH, ScD (2000)

Asha S. Kapadia, PhD (2010)

Epidemiology, Human Genetics and Environmental Sciences

Alfonso H. Holguin, MD, MPH (2004)

Marcus M. Key, MD (1996)

Raul Caetano, MD, MPH, PhD (2015)

William J. Schull, PhD (1998)

Management, Policy and Community Health

Lu Ann Aday, PhD (2007)

Luisa Franzini, PhD (2014)

M. David Low, MD, PhD (2005)

Pauline Vaillancourt Rosenau, PhD (2013)

TECHNOLOGY

UTHealth School of Public Health has a strong commitment to the use of distance education technologies to increase course availability and provide robust educational experiences for all students. A variety of communication technologies link students and faculty with one another at the six campuses of the school across Texas (Austin, Brownsville, Dallas, El Paso, Houston, and San Antonio).

Since 1993, courses have been made available at all campuses via the interactive video conference network (ITV). Interactive video conferencing allows faculty and students to see and hear each other in real time in a traditional classroom experience. In 2006, state-of-the-art ITV classrooms were completed that enhance audio and video interactions and allow faculty with specific specialties to share their knowledge across all campuses as guest presenters. In this manner, faculty and students from all sites can participate in courses not originating at their location, and can share in additional learning experiences through seminars, “brown bags,” and conferences that are an important part of graduate education. Most ITV courses utilize Canvas, a Web-based content management system accessible by all students, to provide content, group discussion boards, and chat rooms to supplement classroom activities. Students can access a large selection of online periodicals and other professional publications through their Web-based link to the UTHealth School of Public Health Library. Increasingly, courses are available online including the core courses covering the basic disciplines of public health. However, no degree program at UTHealth School of Public Health can be completed entirely online.

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.

Center for Health Promotion and Prevention Research (CHPPR)

CHPPR conducts research to develop, evaluate, and disseminate health promotion and disease prevention programs in diverse settings and populations. Research areas include: cancer prevention and control, cardiovascular health, tobacco prevention, adolescent health, school health programs, women's health, violence prevention, HIV prevention and alcohol abuse programs.

Director: Maria Fernandez, PhD

Center for Infectious Diseases (CID)

The CID addresses the public health concerns of Texans by providing infrastructure and administrative support for multidisciplinary and coordinated research, teaching, and community service programs; fostering epidemiological and biomedical research and training in infectious diseases; and encouraging international collaborative research efforts addressing infectious disease problems. The CID has an international orientation because of the global reservoir of pathogens and because of the potential for importation in the United States and Texas; the expertise in the area of international health; and the direct application of the clinical and research information learned in foreign settings to our dealing with the epidemic at home.

Director: Herbert DuPont, MD

Center for Innovation Generation (InGen)

InGen examines questions surrounding innovative thinking in science and develops educational programs to teach scientists new methods in creative thinking and problem-solving to move science forward.

Director: Roberta B. Ness, MD, MPH

Coordinating Center for Clinical Trials (CCCT)

The CCCT is involved in the coordination of large, multi-center controlled clinical trials. The goal of the CCCT is to identify important public health problems and design large clinical trials to study the efficacy of appropriate interventions, including the collection, management, reporting, and interpretation of study findings.

Director: Barry Davis, MD, PhD

Coordinating Center for Management and Policy in Population Health (CCMPPH)

The CCMPPH maintains and communicates information on MPACH faculty research and evaluation activities; represents MPACH centers within UTHealth; and keeps MPACH center faculty apprised of relevant UTHealth policies and resources. CCMPPH's vision is supporting faculty research that is personally satisfying, useful to people within and beyond Texas, and sustainable.

Co-Directors: Robert O. Morgan, PhD, and Rebecca S. Wells, PhD

Center for Health Services Research (CHSR)

CHSR conducts research and provides technical assistance and training in the organization, financing, and outcomes of health services, systems, and policies. CHSR focuses on the development and application of health services research methods in the design and evaluation of individually targeted healthcare and community-based public health.

Co-Directors: Charles Begley, PhD, and David Lairson, PhD

Center for Healthcare Data Research

The center supports faculty and student researchers in the use of administrative healthcare data providing technical assistance, training, and analytical experience in reporting of healthcare costs, policy, utilization, clinical outcomes, clinical effectiveness, provider performance, and value assessment. The center houses several medical claim databases covering most of the Texas population and representative and representative samples for the nation.

Co-Directors: Trudy M. Krause, DrPH, and Cecilia Ganduglia Cazaban, MD, DrPH

George McMillan Fleming Center for Healthcare Management

The mission of the George McMillan Fleming Center for Healthcare Management is to provide innovative healthcare research and education in a broad spectrum of healthcare systems, and to bring together leading healthcare executives, researchers, and students to enable change in health delivery and organizational effectiveness.

Director: Lee Revere, PhD

Institute for Health Policy (IHP)

The IHP was established to assist researchers throughout the UTHealth in translating their technical findings into usable advice for program administrators and practical recommendations for health policymakers. The IHP also serves as a catalyst for policy-relevant research and brokers opportunities for faculty to apply their expertise to inform current policy debates.

Director: Stephen Linder, PhD

Hispanic Health Research Center in the Lower Rio Grande Valley (HHRC)

The HHRC, which is housed at the Brownsville Campus, conducts research into diseases prevalent in Hispanic populations. The HHRC has three research cores focusing on obesity and diabetes research and prevention, particularly the impact on mental health and infectious diseases. Training, outreach, and administration are essential parts of the HHRC.

Director: Joseph McCormick, MD

Human Genetics Center (HGC)

The focus of the HGC is to understand the genetic etiology of the common chronic diseases including cardiovascular disease, diabetes, and various vision disorders. Understanding the genetics of these diseases involves locating and characterizing genes underlying the common chronic diseases; characterizing the extent and utility of DNA variation within and among populations and determining how these patterns of variation evolved; and establishing the impact of gene variation on the health of individuals, families, and populations.

Director: Alanna Morrison, PhD

Michael & Susan Dell Center for Healthy Living

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. The center's work fosters improved health behaviors among youth, influences policy and environmental change to support healthy living, and advances professional education and community services.

Director: Deanna M. Hoelscher, PhD

Southwest Center for Occupational and Environmental Health (SWCOEH)

The SWCOEH conducts research in occupational and environmental health (OEH). The SWCOEH also provides continuing education and outreach to the community, OEH professionals and other stakeholders, and offers graduate-level training opportunities in relevant OEH disciplines.

Director: Elaine Symanski, PhD

Texas Public Health Training Center (TPHTC)

TPHTC is a research and education resource for public health workers and students that collaborates with other academic institutions, public health agencies, and community partners to provide competency-based curriculum and training. TPHTC is a state-certified Community Health Worker Training Program and houses the Texas Healthy Homes Training Center.

Director: Linda D. Highfield, PhD

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. The training grants listed below are those that are currently in effect.

National Institute for Occupational Safety and Health (NIOSH) Training Programs

The Southwest Center for Environmental and Occupational Health (SWCOEH) has been awarded funds by NIOSH as an Education and Research Center (ERC) to train graduate students in three areas: Occupational Epidemiology Doctoral Training Program; Occupational and Environmental Medicine Residency Program; and Industrial Hygiene Master’s and Doctoral Training Programs. Tuition and/or stipends are available on a competitive basis to qualified individuals.

Director: Elaine Symanski, PhD

Interdisciplinary Pre- and Post-doctoral Fellowships in Cancer Prevention and Control

This training fellowship is designed to prepare individuals for a successful career in cancer prevention and control research. The pre-doctoral program provides four fellowships per year for doctoral students at UTHealth School of Public Health who have been admitted to doctoral programs in health promotion, behavioral sciences, epidemiology, biometry, policy sciences, or management and community health. Selected individuals receive payment of tuition and a stipend.

Director: Patricia Dolan-Mullen, DrPH

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 that may be available based on funding are listed below; availability may change, amount may change, and only scholarships of \$1,000 or more will be eligible for resident tuition.

Outstanding New Student Scholarship

UTHealth School of Public Health has a limited number of scholarships available for award to outstanding incoming students. This scholarship is awarded on the basis of academic merit and potential for success in public health. Applicants with a GPA of 3.5 or greater on a 4.0 scale, and GRE combined verbal and quantitative scores of 1,200 or better on the old GRE or 310 or better on the revised GRE are eligible to be recommended for the scholarship by their respective departments to the Admissions Committee for consideration. Students cannot apply for this scholarship; instead, the Admissions Committee awards scholarships following recommendations made at the time of admission.

Lu Ann Aday Scholarship in Management, Policy, and Community Health

Eligibility: Returning MPH, PhD, or DrPH student whose research focus is on improving quality of care and or community health. Award is based on merit and financial need.

J. Fred Annegers Memorial Scholarship Fund

Eligibility: Continuing student or new student to the MS or PhD Epidemiology program. Admissions recommendations will suffice for new students. Award is based solely on academic merit.

Baptist Health Foundation San Antonio Scholarship

Eligibility:

Master-level: Must be currently enrolled in the master's program and in good standing. Students must be permanent resident in the 8-county service area and be involved in work, research, or demonstrate a connection in current or future commitment to serve the San Antonio area and following Texas Counties: Atascosa, Bandera, Bexar, Comal, Guadalupe, Kendall, Medina, and Wilson.

Doctoral Level: Must be currently enrolled in the Community Health Practice DrPH program and in good standing. Students must be permanent resident in the 8-county service area and be involved in work, research, or demonstrate a connection in current or future commitment to serve the San Antonio area and following Texas Counties: Atascosa, Bandera, Bexar, Comal, Guadalupe, Kendall, Medina, and Wilson.

Award is based on academic merit and need. One recommendation letter is required.

L. Kay Bartholomew Eldredge Family Endowed Scholarship in Health Promotion and Behavioral Sciences

Eligibility: Incoming and currently enrolled doctoral students with financial need who are studying Health Promotion and Behavioral Sciences.

Palmer Beasley MD Travel Award in International Research

Eligibility: Continuing student working on important public health issues in a developing country of Asia, Africa, or Latin American. Funds can also be used to support travel costs of graduate students, post-doctoral students, or junior faculty from developing countries to come to the United States to work with faculty at UTHealth School of Public Health. Award is based on academic merit.

Robert H. Bigelow Endowed Scholarship

Eligibility: Continuing Biostatistics student. Award is based on academic merit. One recommendation letter is required.

Keith D. Burau, Ph.D. Scholarship

Eligibility: Continuing Biostatistics student with a preference given to a student with disabilities. Award is based on academic merit. One letter of recommendation is required.

Catherine Tyrrell Campbell Scholarship in Public Health

Eligibility: Continuing student. Award is based on academic merit and financial need.

Clifford G. Campbell Scholarship in Public Health

Eligibility: Incoming or continuing student. Award is based on academic merit and financial need.

Leslie A. Chambers Endowed Scholarship Fund

Eligibility: Continuing Environmental Sciences student. Award is based solely on academic merit.

The Dolan-Mullen Family Scholarship in Public Health Education/Health Promotion

Eligibility: Student pursuing a degree in Health Promotion/Health Education. Award is based on academic merit and need. Two letters of recommendation are required.

G. Roger Florky Memorial Scholarship Fund

Eligibility: Occupational Health or Industrial Hygiene student. Student must partially support his/her education through employment. Award is based on academic merit and need.

Julius and Suzan Glickman Endowed Scholarship in Innovation

Eligibility: Continuing student. Preference will be given to those students in the Innovation Program. Award is based on academic merit.

Richard M. Grimes Scholarship in Public Health

Eligibility: Continuing student. Award is based on academic merit and financial need.

Ronald B. Harrist Scholarship in Public Health

Eligibility: Continuing student at the Austin campus. Award is based on academic merit.

Robert J. Hardy and C. Morton Hawkins Endowed Scholarship in Biostatistics

Eligibility: Continuing Biostatistics student. Award is based on academic merit.

Mr. and Mrs. Ralph T. Hull Scholarship in Public Health

Eligibility: Continuing student. Award is based on academic merit.

Lu-Yu Hwang, M.D. and R. Palmer Beasley, M.D. Scholarship in Global Health

Eligibility: Continuing student with an interest in Global Health. Award is based on academic merit.

Marcus M. Key Scholarship in Occupational and Environmental Health

Eligibility: Continuing student in Occupational Health or Environmental Sciences discipline, who has completed a minimum of one semester, or a new student with exceptional background, training, and potential for excellence in the field of Occupational Health. Award is based solely on merit. Application must be accompanied by two letters of recommendation.

Carolyn and Matt Hourie Endowed Scholarship in Nutrition

Eligibility: New or returning student whose academic and career plans include a focus on healthy nutrition as a critical component of public health. Award is based on academic merit and financial need.

The D. Jack Kilian Memorial Scholarship

Eligibility: Student pursuing a degree in Cytogenetics, Genetics, Toxicology, or Occupational Medicine. Award is based on academic merit and need.

Dr. Lawrence E. Lamb Scholarship Fund

Eligibility: Student pursuing DrPH degrees in Health Promotion. Award is based on academic merit and need.

Ronald J. Lorimor Memorial Scholarship Fund in Behavioral Sciences

Eligibility: Student pursuing a PhD in Behavioral Sciences. Award is based on academic merit and need. Application must be accompanied by two letters of recommendation.

Dr. David W. Martin Memorial Scholarship

Eligibility: Continuing student. Award is based on academic merit and financial need.

Guy and Alissa McDaniels Memorial Scholarship Fund in Oncology and Infectious Disease

Eligibility: Continuing student in Epidemiology, Human Genetics & Environmental Sciences, who has successfully completed a minimum of one semester and has a background, training, and potential for excellence in oncology or infectious diseases research. Award is based on academic merit and financial need.

Ginni and Richard Mithoff Endowed Scholarship in Health Promotion and Behavioral Sciences

Eligibility: Continuing student. Award is based on academic merit and financial need.

Laura S. Moore and Don Sanders Scholarship

Eligibility: Currently enrolled student in the Dietetic Internship. Award is based on merit.

Lem and Dixie Moyer Endowed Scholarship in Biostatistics

Eligibility: Incoming or continuing Biostatistics student. Award is based on academic merit. One letter of recommendation is required.

People with AIDS International Public Health Scholarship

Eligibility: Returning master's or doctoral student conducting qualitative research on Human Immunodeficiency Virus, Acquired Immune Deficiency Syndrome, or sexually-transmitted diseases, with a focus on women, gender issues, or underserved communities. Student's research will be conducted in a country outside the United States with a preference given to Africa or Asia. The scholarship will be acknowledged in the student's thesis or dissertation. Award is based on academic merit.

People with AIDS Public Health in the Americas Scholarship

Eligibility: Returning master's or doctoral student conducting qualitative research on Human Immunodeficiency Virus, Acquired Immune Deficiency Syndrome, or sexually-transmitted diseases, with a focus on women, gender issues, or underserved communities. Student's research will be conducted in North, Central, or South America or the Caribbean. The scholarship will be acknowledged in the student's thesis or dissertation. Award is based on academic merit.

Richard D. Remington Memorial Student Scholarship Fund

Eligibility: Continuing Biostatistics student who has completed a minimum of one semester. Award is based on academic merit. Application must be accompanied by two letters of recommendation.

Susan G. Sampson Endowed Memorial Scholarship Fund

Eligibility: Master's student who has completed at least two semesters and who demonstrates an interest in community health assessment and applications, reflected by a written statement of goals and/or an appropriate thesis topic. Award is based on academic merit and financial need.

Susanne M. Savely Scholarship

Eligibility: Continuing female student in the MS Environmental Sciences Program. Award is based on academic merit.

The John E. Scanlon Memorial Scholarship

Eligibility: Qualified candidate who has a focus in Tropical Diseases. If an appropriate candidate is not found, the scholarship will be used to support a student who has a focus in Global Health. Award is based on academic merit.

Serafy Foundation Endowed Scholarship in Public Health

Eligibility: Continuing student at the Brownsville campus. Award is based on academic merit.

Richard K. Severs Endowed Scholarship Fund

Eligibility: Continuing Environmental Sciences student. Award is based solely on academic merit.

Southeast Section of the T.W.P.C.A. Endowed Scholarship

Eligibility: Continuing Environmental Science student who has successfully completed a minimum of one semester with background, training, and potential for excellence in the field of Environmental Sciences. Award is based on academic merit and need.

Reuel A. Stallones Memorial Scholarship Fund

Eligibility: Continuing student. Award is based solely on academic merit.

Lauren and Adam Strauss Endowed Scholarship

Eligibility: Continuing student. Award is based on academic merit.

Dr. Oddis Calvin Turner Endowed Scholarship in Health Promotion and Behavioral Sciences

Eligibility: Continuing student. Student must be actively involved in community service, demonstrate leadership qualities, and be committed to working in an African-American community after obtaining a degree. Award is based on academic merit and financial need.

Polly Sparks Turner, M.P.H., Dr.P.H. Endowed Scholarship in Community Health

Eligibility: Continuing student. Student must be actively involved in community service, demonstrate leadership qualities, and be committed to working in an African-American community after obtaining a degree. Award is based on academic merit and financial need.

Thien Vu Scholarship

Eligibility: PhD student in the areas of Management, Policy and Community Health with preference for studies in Health Economics/Health Services. Award is based on academic merit.

Dr. M. Stewart West Memorial Scholarship in Biometry

Eligibility: Continuing Biostatistics student who has completed a minimum of one semester, has background, training, and potential for excellence in the field of Biostatistics. Award is based on academic merit and need.

President James T. Willerson/Nancy Beamer Willerson Endowed Scholarship in the School of Public Health

Eligibility: Continuing student. Award is based on academic merit and financial need.

Marion Zetzman Memorial Scholarship Fund

Eligibility: Continuing student. Award is based on academic merit and financial need.

UTSPH Dean's Excellent Scholarship

Eligibility: Continuing student. Award is based on academic merit and financial need.

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
- 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 Services

Career Services at UTHealth School of Public Health assists students and alumni in identifying employment positions, and also offers advice and assistance with resume preparation and the development of related skills necessary for attaining satisfactory careers in public health. The [Career Services](#) website lists useful career and professional development information, including direct links to public health agencies, employment resources, Texas Medical Center employment opportunities, a list of graduate assistant positions available to enrolled students, and a list of local and national position vacancy descriptions.

Career Services also utilizes “[Job Ops](#),” a Web-based system that allows students to register online, upload and manage their resumes, research and apply for jobs, sign-up for interviews, RSVP to attend career events and job fairs, and seek and contact available alumni mentors.

A summary of the responsibilities of Career Services is presented during orientation and the first week of classes. The office is located on the second floor, in the RAS building, in the Office of Academic Affairs and Student Services. There is no charge for this service.

School Organizations

The [UTHealth School of Public Health Student Association](#) 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 students to various school committees, such as the Academic Council.

For more information on Student Groups, please see the following webpage <https://sph.uth.edu/current-students/student-groups/>.

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, the GPA will be calculated on letter-graded courses using only the grade from the repeated course. 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.

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.

Academic Conflict Resolution

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 file a complaint through the Assistant Dean of Academic Affairs and Student Services. The assistant dean forwards an unresolved complaint to the Academic Council for facilitation of the academic conflict resolution process.

The [academic conflict resolution procedure](#) 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 for advisory committee members. Evaluation week for all students is scheduled at the end 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 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 Assistant Dean for Academic Affairs and Student Services 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 assistant dean.

The plan should be developed by the advisor and the student and sent to the Assistant Dean for Academic Affairs and Student Services 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 faculty 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 Assistant Dean of Academic Affairs and Student Services 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 Assistant Dean for Academic Affairs and Student Services 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 Assistant Dean for Academic Affairs and Student Services 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 Assistant Dean for Academic Affairs and Student Services 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 3-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 Assistant Dean for Academic Affairs and Student Services 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](#).

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 Assistant Dean of Academic Affairs and Student Services, 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 Southern Association of Colleges and Schools require that an institution that offers distance or correspondence education documents each of the following: (Distance and correspondence education) 4.8.1 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 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 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 is a member of the Texas Health Science Libraries Consortium (THSLC), which was formed to develop cooperative programs to improve access to biomedical information at participating institutions. The five library members of THSLC are:

UTHealth School of Public Health Library
Houston Academy of Medicine-Texas Medical Center Library (TMC)
MD Anderson Cancer Center Research Medical Library (MDA)
UT Dental Branch at Houston Library (TDB)
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 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. The UTHealth School of Public Health Library is privileged to have experienced and knowledgeable staff who enthusiastically assist faculty, students, and staff in determining which services will best meet their information needs, then working to meet those needs in the most efficient and effective manner possible.

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 SPH-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. These services are typically provided at no cost to the grant.

UTHealth School of Public Health maintains its own raised floor data center and has access to two additional data centers for expanded services and capabilities. The UTHealth network has four firewall layers to protect variant levels of data to the highest degree possible. In addition SPH-IT has recently implemented security systems to further secure our database environment with database “firewall” since it hosts clinical databases for research. SPH-IT datacenter hosts systems in the secure environment as well as servers facing the Internet. SPH-IT works very closely with the UTHealth network security in proactively monitoring these systems that face the public.

The school is connected to the campus 10Gb network backbone and provides a 1Gb links to the desktop as a standard in the school. Advanced network monitoring technologies help supply the school with diagnostic and corrective tools to maintain the ever-expanding network. Along with the other UT institutions in Texas, we connect to the high speed UT network infrastructure. Access to our wireless network is available throughout the entire RAS building.

UTHealth maintains high speed connections to collaborative teaching and research networks Internet-2 and the Texas LEARN network. These networks provide high speed fiber access to other collaborators both within the UT System and beyond.

SPH-IT manages a very restricted and secure database/file system environment to house claims data used for research at the school. This space houses data from various sources from

the around the nation and is restricted to small group of researchers. This environment can only be accessed from a set of terminal servers. Every user of this data needs prior approval from the PI, the IRB to use (subset of) the data, and are also not permitted to download any extracts to their local devices. They are allowed to query only what IRB has permitted, and use the analytical tools provided within the environment. Results are stored within the secure environment on a file system. All activity actively monitored. In addition to the restrictions, a database firewall device is used to monitor all activity inside the databases and restrict users from querying specific data elements within the tables of the databases and any user accessing any restricted data elements loose access. All activity is monitored by UTHealth IT security.

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 advanced software packages available today. A partial list of the software packages that are available are Microsoft Office application suite, RedCap, Stata, Stata MP, MiniTab, SAS, EpiInfo, SmartDraw, S-Plus, TreeAge, R, WinBugs, ArcInfo, ArcGIS, @Risk, Simul8, MapInfo, MapMarker, Surfer, and StatTransfer. Printing and scanning are also available to students accessing the traditional computer labs. UTHealth maintains a number of systems available to students including Canvas Learning Management System, SecureShare for secure collaborative file sharing with anyone around the world, Webmail for accessing electronic mail when away from the office, and iRis for electronic IRB submission and approval. Students at UTHealth School of Public Health must have a personal computer available to them as a graduate student. For software not provided through the virtual computer lab, the school provides reduced software prices through the UT Bookstore 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 consider first a computer 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 enrolled in an online course at any time must have access to a web camera (with preferred resolution of at least 640 x 480, but 1280 x 720 is preferred), and the computer must also include a microphone. See chart below for other computer requirements listed. 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+ or higher (preferred), Mac OS X 10.7 (Lion) or higher
Web Camera	Resolution at least 640 x 480, but 1280 x 720 preferred, should also include a microphone
Memory (RAM)	2 GB minimum, 4 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.
Proctor Software	The latest versions of Adobe Flash Player and Shockwave Player are required for Web-based proctoring solution. 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.