

Epidemiology, M.S.

COLLEGE OF PUBLIC HEALTH (<http://cph.temple.edu>)

About the Program

The conduct of epidemiologic research involves the study of the distribution of disease and/or injury in human populations. The M.S. in Epidemiology degree is designed specifically for students interested in in-depth training and knowledge of the research techniques appropriate to conducting epidemiologic studies in a particular concentration of health research. Master's-level epidemiologists work in applied settings conducting disease surveillance and outbreak investigations or in research settings developing and evaluating research hypotheses generated to understand the effects of behavioral, biological, environmental, and social factors on human health. Since epidemiology is the principal science underlying disease prevention and control programs, this training is also a basic component for other degree and training programs in public health and preventative medicine.

Time Limit for Degree Completion: 3 years

Campus Location: Main, with courses also offered at the Center City and Health Sciences Center campuses

Full-Time/Part-Time Status: The program is designed to accommodate both full-time and part-time students. While the time limit for degree completion is set at 3 years, full-time students are expected to earn their degree within 2 years; part-time students are granted the additional year.

Interdisciplinary Study: Students are encouraged to develop programs of study that are interdisciplinary in nature, involving coursework across departments, schools, and colleges. Research in affiliated units is encouraged.

Affiliation(s): Research affiliations of the Graduate Faculty of the M.S in Epidemiology program include the Center for Obesity Research, the Department of Nursing, the Fox Chase Cancer Center, Temple University School of Medicine and Children's Medical Center, and Temple University School of Podiatric Medicine. Additional research opportunities at Temple include the Institute for Survey Research, the Social Science Data Library, and the Office of Institutional Research and Assessment.

Study Abroad: Temple University has campuses in Tokyo, London, and Rome where independent research can be pursued under advisement.

Accreditation: The program is accredited by the Council on Education for Public Health (CEPH).

Areas of Specialization: Areas of specialization can be dictated through the area of concentration pursued by the student in her/his thesis research.

Job Prospects: Graduates of the M.S in Epidemiology program are prepared to be faculty members or researchers in colleges and universities or to hold research-related positions in a wide range of organizations. Graduates are employed in health systems, hospitals and clinics, public health departments, and public health and other healthcare and human service agencies. Some graduates are employed by schools at the local, state, and federal levels. Graduates also work in pharmaceutical companies, non-profit and for-profit corporations, foundations, and consulting firms.

Non-Matriculated Student Policy: Students are permitted to take up to 9 credits of coursework before matriculation. If a student is accepted into the program, those courses may be applied toward the degree requirements. Course selection should be made in consultation with an advisor, and students should be aware that completion of coursework does not ensure admission into the program.

Financing Opportunities: Teaching Assistants (TAs) and Research Assistants (RAs) provide 20 hours of service per week. TAs may be assigned to assist in the teaching of courses, including grading examinations and papers or teaching laboratory sections. Some TAs independently teach undergraduate courses. RAs perform supervised research activities. Both assistantships carry a minimum stipend and full tuition remission for up to 9 credits per term. Applications for assistantships are available from the Department of Epidemiology and Biostatistics and must be submitted by January 15 for the following Fall term. The application requires a statement of previous teaching and/or research experience, areas of interest, and future goals; unofficial copies of transcripts; and a curriculum vitae. The department makes offers of assistantships following admission to the program. Applications should be addressed to:

Levent Dumenci, Ph.D.
 Chair, Department of Epidemiology and Biostatistics
 939 Ritter Hall Annex (004-09)
 1301 Cecil B. Moore Avenue
 Philadelphia, PA 19122-6005
 LDumenci@temple.edu

Admission Requirements and Deadlines

Application Deadline:

Fall: March 1

All applicants to the M.S. in Epidemiology program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

Letters of Reference:

Number Required: 3

From Whom: Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence and, if appropriate, research supervisors or mentors.

Coursework Required for Admission Consideration: Proficiency in statistical programming and a minimum of 6 credits of undergraduate quantitative and/or analytical methods (statistics, research design, etc.) are required.

Bachelor's Degree in Discipline/Related Discipline: A baccalaureate degree is required.

Statement of Goals: Approximately 500 to 1,000 words include your interest in the M.S. in Epidemiology program, your research area of interest, research goals and experience, current quantitative skills, future career goals, and academic and research achievements.

Standardized Test Scores:

GRE: Required. Minimum scores should be 500 (old test) on both the verbal and quantitative sections or, on the new test, 153 on the verbal section and 144 on the quantitative section.

TOEFL (international applicants only): 79 iBT or 550 PBT minimum.

Resume: Current resume or curriculum vitae required.

Interview: An interview may be required.

Test Waivers: Postdoctoral applicants who hold a terminal degree from an accredited institution may request a waiver of the GRE.

Program Requirements

General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 36

Required Courses:

Code	Title	Credit Hours
College Core Course		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
Core Courses		
EPBI 5101	Fundamentals of Epidemiology	3
EPBI 5201	Epidemiological Research Methods I	3
EPBI 8001	Research Methods in Public Health	3
EPBI 8202	Epidemiological Research Methods II	3
Electives		
Choose three from the following:		
ENVH 8207	Environmental Epidemiology	
EPBI 5204	Mental Health Epidemiology	
EPBI 5500	Seminar in Current Issues in Public Health	
EPBI 8011	Social Epidemiology	
EPBI 8205	Chronic Disease Epidemiology	
EPBI 8206	Infectious Disease Epidemiology	
EPBI 8208	Data Management and Analysis ¹	
EPBI 8209	Epidemiology of HIV/AIDS	
GUS 5071	Medical Geography	
Advanced Quantitative Methods Courses		
Choose three from the following:		
EPBI 5002	Biostatistics ²	
EPBI 8012	Multivariable Biostatistics	
EPBI 8201	Structural Equation Modeling	

EPBI 8204	Multilev Mod in Int Res	
EPBI 8208	Data Management and Analysis ¹	
EPSY 8625	Intermediate Educational Statistics	
EPSY 8826	Multivariate Research Methods	
SOC 8211	Inferential and Multivariate Statistics	
STAT 8103	Sampling Theory	
STAT 8105	Univariate Time Series Analysis	
STAT 8106	Linear Models I	
STAT 8107	Design of Experiments I	
STAT 8108	Applied Multivariate Analysis I	
STAT 8116	Categorical Data Analysis	
STAT 8117	Clinical Trials	
Non-Didactic Courses		
EPBI 9996	Masters Res in Pub Hlth (2 terms)	6
Total Credit Hours		36

¹ Course may selected as an elective or as an advanced quantitative methods course, but not in both categories.

² EPBI 5002 Biostatistics is highly recommended.

Culminating Events:

Thesis:

The master's thesis documents the student's independent research and demonstrates mastery of her/his primary area of interest. Thesis research is conducted under the direct supervision of an academic advisor. The specific topic for research should be of current interest in the professional community. After a research topic is selected, the student performs preliminary background research. A thesis proposal is then submitted describing the plan for further steps toward completion of the proposed research. The student may continue the research only after the proposal is approved by the committee. Presentation of methods and study results is conducted upon completion of the thesis.

Contacts

Program Web Address:

<https://cph.temple.edu/epibio/programs-offered/graduate/ms-epidemiology>

Department Information:

Dept. of Epidemiology and Biostatistics
Ritter Hall Annex, 9th Floor (004-09)
1301 Cecil B. Moore Avenue
Philadelphia, PA 19122-6005
publichealth@temple.edu
215-204-8726

Submission Address for Application Materials:

<https://sophas.liaisoncas.com/>

Department Contacts:

Admissions:

CPH Office of Admissions
cph@temple.edu
215-204-5200

Theresa White
Senior Graduate Advisor
theresawhite@temple.edu
215-204-5105

Chairperson:

Levent Dumenci, Ph.D.
Professor
LDumenci@temple.edu

215-204-4099

Courses

EPBI 5002. Biostatistics. 3 Credit Hours.

This course introduces applied biostatistics as used in research in public health. Topics of study include statistical methods used for descriptive and analytic research, inferential statistics, surveillance systems, and statistical software used in public health.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

College Restrictions: Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

Repeatability: This course may not be repeated for additional credits.

EPBI 5003. Spatial Analysis in Public Health. 3 Credit Hours.

This course will create a methodological framework for approaching public health issues within the context of spatial investigations of health and disease, both internally via perceptual mapping, and externally via geographic information systems (GIS). This integrative discipline provides the opportunity for students to draw upon the concepts and techniques of sound public health and add a spatial perspective to their analysis.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

EPBI 5101. Fundamentals of Epidemiology. 3 Credit Hours.

This course introduces descriptive and analytical epidemiology. Concepts and methods used in public health are covered, with emphasis on the calculation and interpretation of indices of community health; morbidity and mortality rates; age-adjustment; and risk ratios, sensitivity, specificity, and predictive value of screening tests. Surveyed are epidemiological research designs, surveillance systems, and evidence-based practice guidelines. Note: This is an introductory course for students in public health and related fields. Master's and doctoral students who have strong quantitative skills and plan to conduct epidemiological research should enroll in EPBI 5201.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

EPBI 5201. Epidemiological Research Methods I. 3 Credit Hours.

This course provides an introduction to the fundamentals of conducting epidemiologic research and protocol development. It covers definitions of epidemiology; measures of disease frequency and risk assessment; measures of effect and association; epidemiologic study designs, including randomized clinical trials, cohort, case-control studies, and cross-sectional surveys; assessment of screening programs; an overview of the role of bias and confounding in epidemiologic study results; and analytic techniques, including modeling using multiple variables, survival analysis, and issues related to quality assurance. Note: This course is the introductory epidemiology course for students in the M.S. in Epidemiology or related Public Health degree programs that require advanced quantitative methods. May be taken in place of EPBI/PBHL 5101 for students in the M.P.H., M.S. in Environmental Health and Ph.D. programs.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

EPBI 5204. Mental Health Epidemiology. 3 Credit Hours.

Epidemiology of psychiatric disturbances is explored, including alcohol and other drug dependencies, psychosocial aspects of health and illness. The emphasis is on epidemiologic methods and theories in psychosocial and mental health research.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

College Restrictions: Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

Repeatability: This course may not be repeated for additional credits.

EPBI 5500. Seminar in Current Issues in Public Health. 3 Credit Hours.

Seminar topics rotate to address current issues in public health research, policy and practice.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

College Restrictions: Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

Repeatability: This course may be repeated for additional credit.

EPBI 8001. Research Methods in Public Health. 3 Credit Hours.

This course examines how to develop and test models, formulate research problem statements and hypotheses, and implement and evaluate research designs and methods of data collection in public health research. It concentrates on fundamental concepts in research design and measurement that help prepare the student to plan and implement theoretically informed and methodologically sound scientific studies in public health and to critically evaluate and discuss public health research. The course emphasizes ethical and practical methods of studying and evaluating causal relations (efficacy and internal validity); determining generalizability of observations (effectiveness, external and ecological validity); and accurate and reliable measuring and conceptualizing of variables (construct validity). In addition, it covers systematic literature searches and randomized controlled trials, which are both increasingly important methods for conducting research in public health.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

College Restrictions: Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

Repeatability: This course may not be repeated for additional credits.

EPBI 8002. Research Seminar in Public Health. 3 Credit Hours.

This is a research seminar on linkages between theory and research in social and behavioral health studies. It is required for Ph.D. students prior to taking the preliminary examinations.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

EPBI 8011. Social Epidemiology. 3 Credit Hours.

The purpose of this course is to provide an introduction for graduate students to the key social factors that are thought to influence health. These social factors include constructs such as gender, race, socioeconomic status, and social support. Understanding these social factors is important for public health research and practice. These factors can be considered "fundamental causes" of health outcomes insofar as they may cause or modify other factors that are known to influence health, such as individual behaviors or genetics. The course will focus on the conceptual and theoretical basis of these social factors, how these social factors are measured in epidemiologic research, and the mechanisms by which these social factors are thought to affect health. Students will have the opportunity to improve their skills in critically evaluating empirical data about the association between these social factors and health.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

College Restrictions: Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:

EPBI 5101|Minimum Grade of B-|May not be taken concurrently
 OR PBHL 5101|Minimum Grade of B-|May not be taken concurrently
 OR EPBI 5201|Minimum Grade of B-|May not be taken concurrently
 OR PBHL 5201|Minimum Grade of B-|May not be taken concurrently.

EPBI 8012. Multivariable Biostatistics. 3 Credit Hours.

The objective of the course is to provide basic theory and application of regression models, analysis of variance, nonparametric statistics, and survival analysis applied to the analysis of population-based data. The emphasis will be on generating and interpreting results and health related applications rather than on statistical theory. The course is designed for graduate students in public health who are already familiar with basic statistical concepts, including descriptive statistics, the components of statistical inference (p-values, hypothesis tests, confidence intervals, etc.), as well as concepts of confounding and effect modification.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:

EPBI 5002|Minimum Grade of B-|May not be taken concurrently
 OR PBHL 5002|Minimum Grade of B-|May not be taken concurrently.

EPBI 8201. Structural Equation Modeling. 3 Credit Hours.

An extremely rapid pace of change in statistics and methodology in the field of developmental processes and family systems requires that graduate students (and newly minted PhDs in academic and applied settings) be well versed in current data analytic techniques and able to keep abreast of emergent techniques by being aware of contemporary methodological literature. This course will illustrate the uses of structural equation models for cross-sectional, longitudinal, and family data analysis. The course is organized to take participants through each of the cumulative steps in the analysis: deciding which type of model is appropriate, setting up the data file and coding variables, interpreting and displaying empirical findings, and presenting results in both verbal and written form. Class time will be devoted primarily to lectures, examples, group discussions, and hands-on application of course material.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

EPBI 8202. Epidemiological Research Methods II. 3 Credit Hours.

The content of this course illustrates statistical concepts, methods, and strategies used in epidemiologic studies, beyond the principles discussed in EPBI/PBHL 5201 (Epidemiological Research Methods 1). Topics include a review of basic study designs, analysis of prospective and retrospective data, assessment of bias, confounding, effect modification/interaction, statistical methods of stratification and adjustment, sample size/power calculations, importance of quality control and data monitoring in randomized clinical trials, critical determination of causality, and the comprehensive analyses, reporting and presentation of epidemiologic results.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:

EPBI 5201|Minimum Grade of B-|May not be taken concurrently
OR PBHL 5201|Minimum Grade of B-|May not be taken concurrently.

EPBI 8203. Public Health Data Reporting. 3 Credit Hours.

Systematic reviews are essential tools for health care workers, researchers, consumers, and policymakers who need to keep abreast of the accumulation of knowledge within their field. Systematic reviews provide more objective evaluation of the evidence than has been possible with traditional narrative reviews, and so can help resolve uncertainty and point toward promising future directions in research and practice. When appropriate, meta-analyses can help increase the precision of estimates regarding treatment effects and way to improve treatments. For example, identification of subgroups of individuals most (or least) likely to benefit from treatment can generate new questions to be addressed.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:

EPBI 5101|Minimum Grade of B-|May not be taken concurrently
OR PBHL 5101|Minimum Grade of B-|May not be taken concurrently
OR EPBI 5201|Minimum Grade of B-|May not be taken concurrently
OR PBHL 5201|Minimum Grade of B-|May not be taken concurrently.

EPBI 8204. Multilev Mod in Int Res. 3 Credit Hours.

Interdisciplinary research nearly always involves data with a nested, hierarchical, or multilevel structure. Such data violate the standard statistical assumption of independence of observations. As well, the most important interdisciplinary research questions often involve understanding effects of one level of this structure on characteristics of another level of structure. Within the intervention contexts, individuals often serve as their own context as events unfold over chronological time. This course provides a broad and comprehensive introduction to analysis of multilevel data with an emphasis on questions which bridge disciplines. Participants should be familiar with the general linear model (analysis of variance, regression) prior to enrolling in this course, but no previous familiarity with mixed models (other than repeated measures ANOVA) is assumed.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

EPBI 8205. Chronic Disease Epidemiology. 3 Credit Hours.

This intermediate course will cover selected topics in chronic disease epidemiology through critical examination of the current literature. Students will have the opportunity to study methodological issues, strategies for prevention, and contemporary issues in research. Coronary heart disease, cancer, diabetes, musculoskeletal disorders, chronic lung diseases and others will be addressed.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:

SBS 5102|Minimum Grade of B-|May not be taken concurrently
 OR PBHL 5102|Minimum Grade of B-|May not be taken concurrently
 OR EPBI 5201|Minimum Grade of B-|May not be taken concurrently
 OR PBHL 5201|Minimum Grade of B-|May not be taken concurrently.

EPBI 8206. Infectious Disease Epidemiology. 3 Credit Hours.

This course provides the basis for understanding infectious diseases, disease transmission, risk factors, outbreak investigation and study designs, surveillance methods, and current infection-control strategies and mechanisms. The purpose of this course is to expose students to the principles and practices of infectious disease epidemiology and how communicable diseases and their control affect public health locally, nationally, and internationally.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:

SBS 5102|Minimum Grade of B-|May not be taken concurrently
 OR PBHL 5102|Minimum Grade of B-|May not be taken concurrently
 OR EPBI 5201|Minimum Grade of B-|May not be taken concurrently
 OR PBHL 5201|Minimum Grade of B-|May not be taken concurrently.

EPBI 8208. Data Management and Analysis. 3 Credit Hours.

The content of this course will illustrate practical concepts, methods, and strategies used in the development, management and analysis of large data sets through in-class and homework exercises, quizzes, and a final project. Each class session will be a mixture of a lecture, demonstration and hands-on SAS programming exercises.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:

EPBI 5002|Minimum Grade of B-|May not be taken concurrently
 OR EPBI 8012|Minimum Grade of B-|May not be taken concurrently.

EPBI 8209. Epidemiology of HIV/AIDS. 3 Credit Hours.

The epidemiology of HIV/AIDS is the subject of this course. Application of epidemiological principles and concepts in infectious disease epidemiology with emphasis on surveillance, research, prevention, and control are covered.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:

EPBI 5101|Minimum Grade of B-|May not be taken concurrently
 OR PBHL 5101|Minimum Grade of B-|May not be taken concurrently
 OR EPBI 5201|Minimum Grade of B-|May not be taken concurrently
 OR PBHL 5201|Minimum Grade of B-|May not be taken concurrently.

EPBI 8211. Epidemiology Grand Rounds. 1 Credit Hour.

The purpose of this course is to socialize, inform and engage graduate-level students in the broader profession of public health through promoting attendance of lectures and background readings of publications for invited speakers through the College of Public Health (CPH). This is a required course for the PhD Epidemiology program. The course will enable students to interact with researchers and practitioners from other settings and universities both nationally and internationally. The course will build students' capacity to work in interdisciplinary teams and address challenging and complex public health problems. Four CPH invited speakers who are presenting their work on substantive programs in a wide range of public health topics will be identified. Enrollment in this course requires that students participate and attend the selected CPH sponsored lectures or symposiums during the term for which they are enrolled as well as participate in course specific meetings and deliverables. For example, prior to the lecture, students will conduct a guided literature search and develop a written review of the state-of-knowledge and gaps in literature related to the speaker's topic. Students will also participate in a directed discussion prior to the invited lecture. Following the discussion, students will attend the lecture, meet with the invited speaker to ask questions, and complete a summary paper outlining the invited speaker's contribution to the science.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:

(EPBI 5101|Minimum Grade of B-|May be taken concurrently)
OR EPBI 5201|Minimum Grade of B-|May be taken concurrently)
AND (EPBI 5002|Minimum Grade of B-|May be taken concurrently)

EPBI 8212. Grantsmanship in Health Research. 3 Credit Hours.

This course will provide students with applied advanced epidemiologic research methods to critically assess gaps in current knowledge and to develop a competitive grant proposal application. Students will apply the epidemiologic methods and knowledge from prior courses and gain expertise in assessing gaps in knowledge, innovative thinking, grant conception, development and writing, study implementation and approach, budget preparation, and grant critiques. In the first half of the course, students will be introduced to the concepts of significance and innovation, identifying gaps in knowledge, choosing an epidemiologic research topic, identifying a funding agency and developing a set of specific aims, significance and innovation statements. In the second half of the course, the grant proposal will be written in the format of an NIH pre-doctoral epidemiology research grant following NIH grant application guidelines including a developed research plan, identified research team, and NIH biosketch and human subject protection plans. Students will be introduced to the concepts of power, sample size and effect size and will calculate necessary power and sample size requirements in the finalized grant proposal. Students will also participate in a mock grant review session. Students will use this opportunity to develop and submit an application for an NIH or foundation pre-doctoral award to support their dissertation work.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

EPBI 8301. Clinical Research Methods in Public Health. 3 Credit Hours.

This course provides an introduction to the core topics in clinical research. Beginning with practical issues in starting and advancing in a career in clinical investigation, the course proceeds to cover diagnosis and treatment studies, research on prognostic and casual risk factors, special types of study design and analyses, principles of measurement in human subjects, studies using secondary databases, and outcomes research. This course will be an elective class for all students enrolled in the Master of Science in Epidemiology, Clinical Research and Translational Medicine, as well as the Doctor of Philosophy in Epidemiology programs. This graduate level course is principally aimed at health care professionals, not limited to the field of public health, usually with graduate courses relevant to their clinical discipline, who desire advanced knowledge and skills in evaluating, designing and implementing clinical research studies.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:

EPBI 5002|Minimum Grade of B-|May not be taken concurrently.

EPBI 8302. Behavioral Measurement. 3 Credit Hours.

This course will cover the classical and modern test theories and their applications to solve measurement problems in practice. This course will educate students on measurement concepts including test standardization, validity, reliability, operational definitions, scaling and latent variables in social and behavioral sciences. Issues surrounding validity and reliability of measures will be discussed in detail. Students will be given an opportunity to critically evaluate existing measures and to propose how a new measure can be developed and evaluated.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:

EPBI 5002|Minimum Grade of B-|May not be taken concurrently
OR EPBI 8012|Minimum Grade of B-|May not be taken concurrently.

EPBI 8307. Systematic Reviews. 3 Credit Hours.

Systematic reviews are essential tools for health care workers, researchers, consumers, and policymakers who need to keep abreast of the accumulation of knowledge within their field. Systematic reviews provide more objective evaluation of the evidence than has been possible with traditional narrative reviews, and so can help resolve uncertainty and point toward promising future directions in research and practice. When appropriate, meta-analyses can help increase the precision of estimates regarding treatment effects and way to improve treatments. For example, identification of subgroups of individuals most (or least) likely to benefit from treatment can generate new questions to be addressed.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

EPBI 9083. Readings and Conference in Public Health. 1 to 3 Credit Hour.

This is an advanced tutorial in public health with an appropriate faculty member. Note: Registration requires a written contract with the supervising faculty member and approval of the student's advisor and of the Director of Graduate Programs.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may be repeated for additional credit.

EPBI 9187. Biostat Cnslt Practicum. 3 Credit Hours.

The objective of this course is to prepare students to collaborate effectively as biostatistics support consultants in the health professions. The emphasis will be to refresh statistical techniques and develop communication and problem solving skills. This course is designed for graduate students in public health who can use well-validated commercial statistical software, such as SAS, for the analyses of data from observational and/or interventional research studies.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may be repeated for additional credit.

EPBI 9189. MPH Capstone Seminar. 3 Credit Hours.

This seminar is required of M.P.H. students during final year of study. The seminar includes integration of coursework and practice skills to develop a fieldwork project or internship in a public health agency.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may be repeated for additional credit.

EPBI 9289. MPH Fieldwork I. 3 Credit Hours.

This course entails a fieldwork project or internship in a public health agency. It includes seminars, oral and written reports of progress, and joint supervision by a preceptor and faculty member.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

EPBI 9389. MPH Fieldwork II. 3 Credit Hours.

This course is an evaluation of the fieldwork project or internship using a full range of research methodologies. Data are collected, analyzed, and reported in a comprehensive final report. Oral and/or poster presentations are presented to public health organizations. The course includes a final oral defense of the project or internship.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may not be repeated for additional credits.

EPBI 9991. Independent Project in Environmental Health. 1 to 3 Credit Hour.

Under the direction of an appropriate graduate faculty member, students tie together their coursework in a project that poses a problem, gathers data to help analyze the problem, and provides a solution. Note: Enrollment must be approved by the student's advisor and the Director of Graduate Programs.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may be repeated for additional credit.

EPBI 9994. Preliminary Examinations. 1 Credit Hour.

This course supports preparation for taking the preliminary examinations in the Health Policy and Social and Behavioral Sciences Ph.D. programs. To enroll, students must have completed all required coursework for the Ph.D. and obtain the approval of the Ph.D. Program Director. Students must be enrolled to take the required preliminary examinations.

Department Restrictions: Must be enrolled in one of the following Departments: CPH:Epidemiology/Biostatistics.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Degree Restrictions: Must be enrolled in one of the following Degrees: Doctor of Philosophy.

Repeatability: This course may be repeated for additional credit.

EPBI 9996. Masters Res in Pub Hlth. 3 Credit Hours.

This course is limited to students who have chosen to fulfill the master's degree by writing a thesis.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may be repeated for additional credit.

EPBI 9998. Dissertation Proposal Research. 1 to 2 Credit Hour.

This course supports preparation of the dissertation proposal. The course is required for students who have passed the preliminary examinations for their PhD program and who have not yet defended the dissertation proposal.

Department Restrictions: Must be enrolled in one of the following Departments: CPH:Epidemiology/Biostatistics.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Degree Restrictions: Must be enrolled in one of the following Degrees: Doctor of Philosophy.

Repeatability: This course may be repeated for additional credit.

Pre-requisites:

EPBI 9994|Minimum Grade of P|May not be taken concurrently.

EPBI 9999. Dissertation Research. 1 to 6 Credit Hour.

This course is limited to Ph.D. candidates who have completed and defended a dissertation proposal that is filed with the Graduate School by the last day to add a course in the semester. Continuous registration in 9999 fall and spring is required until the dissertation is successfully defended.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Student Attribute Restrictions: Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

Repeatability: This course may be repeated for additional credit.