



Twin Cities Campus

Epidemiology Ph.D.

School of Public Health - Adm

School of Public Health

Link to a [list of faculty](#) for this program.

Contact Information:

School of Public Health, MMC 819, A395 Mayo Memorial Building, 420 Delaware Street, Minneapolis, MN 55455 (612-626-3500 OR 1-800-774-8636, Fax: 612-624-4498)

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- Program Type: Doctorate
- Requirements for this program are current for Fall 2017
- Length of program in credits: 61
- This program requires summer semesters for timely completion.
- Degree: Doctor of Philosophy

Along with the program-specific requirements listed below, please read the [General Information](#) section of the catalog website for requirements that apply to all major fields.

The epidemiology PhD program is designed for students interested in research and teaching careers in the health sciences. Students select one of two formal tracks: clinical/biological epidemiology (CBE) or social/behavioral epidemiology (SBE). The two tracks, each with a minimum of 61 credits, emphasize advanced epidemiologic design, methodology, and analytic skills.

The social/behavioral epidemiology track focuses on origins and development of human behavior patterns and how they are influenced and formed by personality, family, culture, and environment. The clinical/biological epidemiology track focuses on the etiology of diseases, particularly cardiovascular, cancer, genetics, and infectious diseases. A detailed description of the details related to each track may be obtained online or by contacting the major coordinator at epichstu@umn.edu.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission

The preferred undergraduate GPA for admittance to the program is 3.00.

For the doctoral program, applicants must have completed or be about to complete a master's degree in a related field.

Special Application Requirements:

Because of the program's strong emphasis on methodology, quantitative aptitude is very important. This can be demonstrated by scoring at or above the 70th percentile on the quantitative section of the GRE, along with satisfactory grades in college-level quantitative courses. At least three recommendations (form and separate letter) from faculty and/or work supervisors with knowledge of the applicant's scholastic and professional capabilities and potential, and a statement of goals and objectives (letter of intent) for seeking a career in epidemiology are also required.

In addition to the above materials, applicants for the Ph.D. program must submit a separate essay (statement of research interests) beyond what is required for the SOPHAS application process that provides evidence of their potential to conduct original research in a specific epidemiologic area and, if possible, that indicates an interest in particular methodologies or study designs. Serious doctoral applicants are encouraged to contact the major coordinator at epichstu@umn.edu before applying. Students begin their studies in the fall semester. Applications must be completed by December 1 of the year prior to beginning the doctoral program for scholarship consideration; the final deadline is February 1.

Applicants must submit their test score(s) from the following:

- GRE
 - General Test - Analytical Writing: 4

International applicants must submit score(s) from one of the following tests:

- TOEFL
 - Internet Based - Total Score: 100
 - Paper Based - Total Score: 600



- IELTS
 - Total Score: 7
- MELAB
 - Final score: 80

Key to [test abbreviations](#) (GRE, TOEFL, IELTS, MELAB).

For an online application or for more information about graduate education admissions, see the [General Information](#) section of the catalog website.

Program Requirements

37 credits are required in the major.

24 thesis credits are required.

This program may be completed with a minor.

Use of 4xxx courses towards program requirements is not permitted.

A minimum GPA of 3.25 is required for students to remain in good standing.

At least 2 semesters must be completed before filing a Degree Program Form.

Students may select one of two formal tracks; both have an applied perspective that emphasizes study design, measurement, quantitative analysis, and data interpretation. Social/behavioral epidemiology focuses on origins and development of human behavior patterns and how they are influenced and formed by personality, family, culture, and environment. Clinical/biological epidemiology focuses on the biological causes of diseases, especially determinants of cardiovascular disease, cancer, infectious diseases, and genetic epidemiology.

The PhD program includes a minimum curriculum of 61 credits. Students must pass written and oral preliminary examinations, serve as a teaching assistant for one semester, write and defend a dissertation, and prepare a first-authored manuscript for publication.

Required Coursework

Take the following courses for a total of 13 credits:

[PUBH 7401](#) - Fundamentals of Biostatistical Inference (4.0 cr)

[PUBH 6348](#) - Writing Research Grants (2.0 cr)

[PUBH 6742](#) - Ethics in Public Health: Research and Policy (1.0 cr)

[PUBH 8341](#) - Advanced Epidemiologic Methods: Concepts (3.0 cr)

[PUBH 8342](#) - Advanced Epidemiologic Methods: Applications (3.0 cr)

Take one of the following teaching courses for at least 1 credit:

[GRAD 8101](#) - Teaching in Higher Education (3.0 cr)

or [GRAD 8200](#) - Teaching and Learning Topics in Higher Education (1.0 cr)

Thesis Credits

Take at least 24 doctoral thesis credits.

[PUBH 8888](#) - Thesis Credit: Doctoral (1.0 - 24.0 cr)

Program Sub-plans

Students are required to complete one of the following sub-plans.

Students may not complete the program with more than one sub-plan.

Clinical/Biological Epidemiology

Clinical/biological epidemiology focuses on the biological causes of diseases, especially determinants of cardiovascular disease, cancer, infectious diseases, and genetic epidemiology.

Clinical/Biological Track

A minimum of 23 credits is required.

Biological Methods/Statistics Requirement (6 credits minimum)

Take one of the following required courses:

[PUBH 7420](#) - Clinical Trials: Design, Implementation, and Analysis (3.0 cr)

or [PUBH 6363](#) *(Inactive)* (3.0 cr)

Choose additional credits from the following to complete the biological methods/statistics requirement:

[PUBH 7402](#) - Biostatistics Modeling and Methods (4.0 cr)



[PUBH 7430](#) - Statistical Methods for Correlated Data (3.0 cr)
[PUBH 7407](#) - Analysis of Categorical Data (3.0 cr)
[PUBH 6915](#) - Nutrition Assessment (2.0 cr)
[PUBH 7445](#) - Statistics for Human Genetics and Molecular Biology (3.0 cr)
[PUBH 8141](#) - Doctoral Seminar in Observational Inference (2.0 cr)
[PUBH 8804](#) - Advanced Quantitative Methods Seminar (3.0 cr)

Content Area Requirement (4 credits minimum)

Take at least 4 credits from the following:

[PUBH 6386](#) - Cardiovascular Disease Epidemiology and Prevention (2.0 cr)
[PUBH 6387](#) - Cancer Epidemiology (2.0 cr)
[PUBH 6385](#) - Epidemiology and Control of Infectious Diseases (2.0 cr)
[PUBH 6381](#) - Genetics in Public Health in the Age of Precision Medicine (2.0 cr)
[PUBH 6389](#) - Nutritional Epidemiology (2.0 cr)
[PUBH 6140](#) - Occupational and Environmental Epidemiology (2.0 cr)

Additional Credits (13 credits minimum)

Select courses in consultation with the advisor. Courses can include biological methods/statistics courses listed above not used to satisfy the biological methods/statistics requirement, or other appropriate courses.

Social/Behavioral Epidemiology

Social/behavioral epidemiology focuses on origins and development of human behavior patterns and how they are influenced and formed by personality, family, culture, and environment.

Social/Behavioral Track

A minimum of 23 credits is required.

Behavioral Methods/Statistics Requirement (6 credits minimum)

Take one of the following required courses:

[PUBH 6363](#) (~~Inactive~~) (3.0 cr)
or [PUBH 7420](#) - Clinical Trials: Design, Implementation, and Analysis (3.0 cr)

Choose additional credits from the following to complete the Behavioral Methods/Statistics requirement:

Take 1 or more course(s) from the following:

- [PUBH 7402](#) - Biostatistics Modeling and Methods (4.0 cr)
- [PUBH 7430](#) - Statistical Methods for Correlated Data (3.0 cr)
- [PUBH 7407](#) - Analysis of Categorical Data (3.0 cr)
- [PUBH 6915](#) - Nutrition Assessment (2.0 cr)
- [PUBH 8804](#) - Advanced Quantitative Methods Seminar (3.0 cr)

Content Area Requirement (4 credits minimum)

Take at least 4 credits from the following:

[PUBH 6333](#) - Principles of Human Behavior I (2.0 cr)
[PUBH 6334](#) - Human Behavior II (2.0 cr)

Additional Credits (13 credits minimum)

Select courses in consultation with the advisor. Courses can include biological methods/statistics courses listed above not used to satisfy the biological methods/statistics requirement, or other appropriate courses.