

CHRONIC DISEASE EPIDEMIOLOGY CONCENTRATION (CDE)

There is a high demand for well-trained graduates in chronic disease epidemiology. The M.S. with a concentration in Chronic Disease Epidemiology is a one-year program that provides intensive training in epidemiology and research methods for medical and health care professionals, or others seeking the skills necessary to conduct epidemiological research in their professional practice.

Applicants should have a basic understanding of quantitative science and statistics. It is recommended that candidates have strong science backgrounds and demonstrated competency in statistical analysis and logical thinking. Applicants from rigorous programs in the biological or social sciences will be given preference. At a minimum, applicants should have one year of course work in statistics or the equivalent prior to enrolling in this program. Part-time enrollment is permitted.

DEGREE REQUIREMENTS

The Chronic Disease Epidemiology concentration consists of required and elective course work and satisfactory completion of the capstone experience. A total of ten courses is required (excluding the Seminar, CDE 525/CDE 526). It is expected that this program will be completed during a single academic year when a student enrolls full-time. Students with an M.P.H. or relevant graduate degree may be eligible to substitute advanced courses for some of the required courses. Written permission of the DGS is required prior to enrolling in substitute courses.

The Graduate School requires an overall grade average of High Pass, including a grade of Honors in at least one full-term graduate course for students enrolled in a one-year program. In order to maintain the minimum average of High Pass, each grade of Pass on the student's transcript must be balanced by one grade of Honors. Each grade of Fail must be balanced by two grades of Honors. If a student retakes a course in which the student has received a failing grade, only the newer grade will be considered in calculating this average. The initial grade of Fail, however, will remain on the student's transcript. A grade awarded at the conclusion of a full-year course in which no grade is awarded at the end of the first term would be counted twice in calculating this average.

CURRICULUM

Required Courses

Or approved substitutions.

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| CDE 516 | Principles of Epidemiology II | 1 |
| CDE 525 | Seminar in Chronic Disease Epidemiology ¹ | 0 |
| CDE 526 | Seminar in Chronic Disease Epidemiology ¹ | 0 |
| CDE 617 | Developing a Research Proposal ² | 1 |
| or CDE 600 | Independent Study or Directed Readings | |
| or EMD 625 | How to Develop, Write, and Evaluate an NIH Proposal | |

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| EPH 508 | Foundations of Epidemiology and Public Health | 1 |
| EPH 608 | Frontiers of Public Health ³ | 1 |

¹ These courses do not count toward the ten required courses.

² In the capstone courses CDE 617 or EMD 625, the student is required to develop a grant application that is deemed reasonably competitive by the instructor. An alternative to one of these capstone courses, is an individualized tutorial (CDE 600), in which the student completes a manuscript that is suitable for submission for publication in a relevant journal.

³ Students entering the program with an M.P.H. or relevant graduate degree may be exempt.

Three quantitative courses from the following (or approved substitutions):

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|----------|---|---|
| BIS 536 | Measurement Error and Missing Data | 1 |
| BIS 537 | Statistical Methods for Causal Inference | 1 |
| BIS 575 | Introduction to Regulatory Affairs | 1 |
| BIS 621 | Regression Models for Public Health | 1 |
| BIS 628 | Longitudinal and Multilevel Data Analysis | 1 |
| BIS 630 | Applied Survival Analysis | 1 |
| CDE 634 | Advanced Applied Analytic Methods in Epidemiology and Public Health | 1 |
| S&DS 530 | Data Exploration and Analysis ¹ | 1 |
| S&DS 563 | Multivariate Statistical Methods for the Social Sciences ¹ | 1 |

¹ These courses are offered in the Graduate School of Arts and Sciences.

Two elective courses in Chronic Disease Epidemiology. Suggested electives are:

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| CDE 502 | Physiology for Public Health | 1 |
| CDE 532 | Epidemiology of Cancer | 1 |
| CDE 534 | Applied Analytic Methods in Epidemiology | 1 |
| CDE 535 | Epidemiology of Heart Disease and Stroke | 1 |
| CDE 545 | Health Disparities by Race and Social Class: Application to Chronic Disease Epidemiology | 1 |
| CDE 551 | Global Noncommunicable Disease | 1 |
| CDE 562 | Nutrition and Chronic Disease | 1 |
| CDE 572 | Obesity Prevention and Lifestyle Interventions | 1 |
| CDE 582 | Health Outcomes Research: Matching the Right Research Question to the Right Data | 1 |
| CDE 588 | Perinatal Epidemiology | 1 |
| CDE 597 | Genetic Concepts in Public Health | 1 |
| CDE 650 | Introduction to Evidence-Based Medicine and Health Care | 1 |

Students must complete one additional elective, chosen in consultation with their adviser.

COMPETENCIES

Upon receiving an M.S. in the Chronic Disease Epidemiology concentration of Public Health, the student will be able to:

- Evaluate the scientific merit and feasibility of epidemiologic study designs.
- Review and evaluate epidemiologic reports and research articles.
- Analyze data and draw appropriate inferences from epidemiologic studies.
- Write an epidemiologic research proposal.