

Clinical Investigation, M.S.

Requirements

The Master of Science program in clinical investigation requires 37 s.h. of graduate credit. In addition to completing the program's required coursework, students must write a thesis in the form of a manuscript, or a grant proposal for a National Institutes of Health (NIH) career award or its equivalent, with oral defense. Graduate students must maintain a g.p.a. of at least 3.00. Those who receive a grade of C in 7 s.h. of coursework may be dismissed from the program.

The program, which is offered in collaboration with the University's Institute for Clinical and Translational Science, is designed for clinicians interested in pursuing careers in clinical research. It includes in-depth training in biostatistics, epidemiology, research ethics, and academic survival skills as well as didactic training applicable to clinical research careers. Graduates of the program are able to critically evaluate clinical literature, write competitive grant proposals, design and conduct clinical research projects, work effectively with other researchers and support staff, and disseminate research results through manuscripts and presentations.

Prerequisites

The M.S. program requires at least 6 s.h. of prerequisite coursework in the disciplines of pathology, physiology, and/or pharmacology. Students accepted into the degree program who have not completed at least 6 s.h. from those disciplines may meet the requirement while they are enrolled.

The M.S. with a major in clinical investigation requires the following coursework.

Core Courses

Students must take CPH:7270 Principles of Scholarly Integrity: Public Health during their first year in the fall semester (enroll for 0 s.h.) and in the spring semester (enroll for 1 s.h.). They must retake CPH:7270 if they completed the course more than four years ago or if they have changed degree programs.

Code	Title	Hours
All of these:		
BIOS:4120	Introduction to Biostatistics	3
EPID:4400	Epidemiology I: Principles	3
EPID:5241	Statistical Methods in Epidemiology	4
EPID:5500	Introduction to Clinical Epidemiology	3
EPID:5610	Intermediate Epidemiology Data Analysis with SAS and R	3
EPID:6150	Writing for Medical Journals	1
EPID:6400	Epidemiology II: Advanced Methods	4
EPID:6950	Clinical Research Ethics	2
CPH:6100	Essentials of Public Health	2

CPH:7270	Principles of Scholarly Integrity: Public Health (taken first year in the fall and spring semesters for 0 s.h. and 1 s.h. respectively)	1
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Total Hours 26

Capstone Requirement

While a student does not take a final examination of courses, the evaluation of the student for graduation is based upon a positive review of a mentored K or R grant or a mentored publishable research paper. The grant or paper is completed in the second year of the program and based on the area of focus. The capstone is a mentored activity which requires approval by a clinical mentor and a Department of Epidemiology primary faculty member. Successful completion of the course is denoted with a satisfactory (S) grade. The complete grant or paper will be due no later than one month prior to graduation for review.

Code	Title	Hours
EPID:6000	Independent Study in Epidemiology	2

Electives

Students must earn a minimum of 9 s.h. in elective coursework, which must include at least 6 s.h. in a research interest area. The following elective courses are recommended.

Code	Title	Hours
EPID:5214	Meta-Analysis of Epidemiologic Studies	3
EPID:6100	Writing a Grant Proposal	3
EPID:6900	Design of Intervention and Clinical Trials	3
EPID:6910	Pharmacoepidemiology and Comparative Effectiveness Research	3

Research Interest Areas

Community Studies

Code	Title	Hours
CBH:5235	Community-Based Participatory Research	3
CBH:5305	Evaluation: Approaches and Applications	3
CBH:6205	Designing and Implementing Interventions	3
EPLS:5165	Introduction to Program and Project Evaluation	3

Epidemiology

Code	Title	Hours
EPID:5560	Introduction to Molecular Epidemiology	3
EPID:5570	Zoonotic Diseases	3
EPID:6250	Genetics and Epidemiology	3
EPID:6510	Injury Epidemiology	3
EPID:6550	Epidemiology of Infectious Diseases	3
EPID:6560	Hospital Epidemiology	2

EPID:6600	Epidemiology of Chronic Diseases	3
EPID:6640	Epidemiology of Maternal and Infant Health	2
EPID:6650	Cardiovascular Disease Epidemiology	3
EPID:6670	Psychiatric Epidemiology	3
EPID:6700	Cancer Epidemiology and Control	3
DPH:6004	Principles of Oral Epidemiology	3
GEOG:3110	Geography of Health	3

Health Services Epidemiology

Code	Title	Hours
EPID:4990	Practicing Evidence-Based Public Health	3
EPID:6360	Nutrition Intervention in Clinical Trials Research	2
EPID:6900	Design of Intervention and Clinical Trials	3
EPID:6910	Pharmacoepidemiology and Comparative Effectiveness Research	3
EPID:6920	Applied Administrative Data Analysis	2
BIOS:6610	Statistical Methods in Clinical Trials	3
BIOS:7600	Advanced Biostatistics Seminar	3
CBH:6205	Designing and Implementing Interventions	3
PCOL:5136	Pharmacogenetics and Pharmacogenomics	1

Informatics

Code	Title	Hours
EPID:4450	Public Health Data	2
EPID:5200	Principles of Public Health Informatics	3
EPID:5600	Introduction to Epidemiology Data Management and Analysis	3
HMP:5315	Health Information Systems	3
HMP:5370	Health Informatics	3

Nutrition Science

Code	Title	Hours
EPID:6330	Global Nutrition Policy	2-3
EPID:6350	Nutritional Epidemiology	2
EPID:6360	Nutrition Intervention in Clinical Trials Research	2
EPID:6370	Nutrition Intervention in Research Lab	3

Outcomes and Health Services Research

Code	Title	Hours
HMP:5410	Health Economics I	3
HMP:7550	Cost Effectiveness and Decision Analysis	3

HMP:7960	Analytic Issues in Health Services Research I	3
HMP:7965	Analytic Issues in Health Services Research II	3

Pharmacy Science

Code	Title	Hours
PHAR:5310	Health Services Research Seminar	1
PHAR:5350	Introduction to Research Methods	3
PHAR:6305	Foundation Literature in Health Services Research	3

Statistical Methods

Code	Title	Hours
BIOS:6210	Applied Survival Analysis	3
BIOS:6310	Introductory Longitudinal Data Analysis	3

Admission

Applicants must apply through the Schools of Public Health Application Service (SOPHAS); they also must pay the required application fee to the Graduate College through the University of Iowa Office of Admissions when prompted. For detailed application information, visit [How to Apply to the Department of Epidemiology web page](#).

Applicants must hold a doctoral-level degree in a clinical discipline (e.g., M.D., D.O., D.D.S., Ph.D., Pharm.D., D.V.M.) or be enrolled in the Medical Scientist Training Program (Carver College of Medicine). They must hold a baccalaureate degree with a cumulative g.p.a. of at least 3.00; foreign-trained applicants must have an outstanding doctoral training record evidenced by research publications.

Applicants whose first language is not English must submit official test scores to verify English proficiency. Applicants can verify English proficiency by submitting official test scores from the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

Applicants are considered based on their credentials, prior training, and research training plans. Applicants with deficiencies in one area may be admitted if all other components of their application are strong. Individuals must have a sponsoring department.

Applicants must meet the admission requirements of the Graduate College; see the Manual of Rules and Regulations of the Graduate College on the Graduate College website.

Application deadlines for fall admission are June 1 for U.S. citizens, April 15 for international applicants. For summer admission, the deadline is April 1; for spring admission, December 1.

Financial Support

A limited number of graduate research assistantships are available for advanced students; for information, consult the department. For information on financing education through jobs, grants, and loans, contact the University's Office of Student Financial Aid.

Opportunities for funded predoctoral fellowships are available. Funded positions sponsored by federal agencies are available only to U.S. citizens.