

# CLINICAL RESEARCH



The Clinical Research MS program at the University of Minnesota School of Public Health trains the next generation of clinical and translational researchers and principal investigators who will advance our understanding of diseases and their outcomes, and contribute to the development and evaluation of new therapies for patients.

**An in-depth program that provides rich learning and career development for physician scientists and biomedical researchers.**

## CURRICULUM & PROGRAM FORMAT

Students in the MS program follow one of two plans (Plan A or Plan B). A certificate option is also available. Courses in both the MS and certificate focus on clinical research, epidemiology, biostatistics, clinical trials, and ethics.

### PLAN A, 38 CREDITS

Plan A: 25 required credits, 3 elective credits, and 10 thesis credits. Students are encouraged to write their thesis as a manuscript to be submitted for publication. The master's thesis requires an active role in a new or ongoing clinical research project, and is aimed at demonstrating the student's ability to do quantitative analyses. The thesis must include design, implementation, and analysis of a clinical research project.

### PLAN B, 38 CREDITS

Plan B offers greater flexibility in choice of courses (7-11 elective credits) and course availability (most coursework is offered online). Plan B has a capstone project (6-10 credits) designed by the student and approved by the student's mentor and the director of Graduate Studies. Possible projects could include a thesis as in Plan A or a grant at the level of the NIH R21, K-series or R01.

### CERTIFICATE, 16 CREDITS

[include advantages of certificate here] The certificate program requires 16 credits, 11 of which can be taken online. Certificate credits may transfer into the MS for eligible applicants.

## ADVANTAGES OF THE PROGRAM

**Career and impact focused.** This program provides career development and advancement for physician-scientists, clinical scholars, and biomedical researchers.

**Integrated Health Sciences.** The U of M's infrastructure of six health sciences schools, gives students the ability to learn from and work with a diverse array of health experts.

**Exposure.** Fellow students hold advanced doctoral-level degrees, embedding a rich network of colleagues that span health specializations and industries.

**Flexible curriculum.** Students tailor the program with courses that fit their specific educational and training needs. Many courses are offered online.

## CAREER

The field of clinical research is expanding, driven by changing disease patterns and emerging therapeutic approaches from the laboratory, clinical and population sciences. There are growing concerns about the quality and safety of research in humans, as evidenced by public scandals and increasing regulations by the U.S. Food and Drug Administration. The result is an increasing demand for well-trained individuals who bring knowledge to the design, implementation, and interpretation of clinical research studies.

The need and demand reaches beyond Minnesota. The epidemiologic transition, which posits increasing numbers of chronic diseases throughout the developing world, expands the need for testing innovative and appropriate therapies.

The program prepares students to:

- Conduct patient-oriented research, directly interacting with human subjects to better understand disease, therapeutic interventions, clinical trials and more
- Conduct epidemiologic and behavioral studies
- Understand outcomes and the conduct of outcomes-based research
- Learn grant writing skills

## THESIS TITLES BY GRADUATES OF THIS PROGRAM

- Albumin Excretion Rate in Normal Adolescents: Relation to Insulin Resistance and Cardiovascular Risk Factors and Comparisons to Type 1 Diabetes Mellitus Patients
- A pre-post retrospective study of patients with cystic fibrosis and gastrostomy tubes
- Reproducibility of cervical muscle strength and endurance measurements in chronic neck pain patients
- Gastrointestinal Bleeding Rates in Nonpulsatile and Pulsatile Left Ventricular Assist Devices
- Thrombocytosis in myelodysplastic and myeloproliferative syndromes
- Predictors of Renal Structural Change Over 5 Years in Young, Type 1 Diabetic Patients

## ADMISSIONS REQUIREMENTS

Applicants to this program must have an advanced health professional degree (MD, DDS, DVM etc.) or any other advanced doctoral degree in a clinical biomedical field from an accredited college or university. Applicants with advanced nursing degrees (MS or MSN) will also be considered. Certificate applicants should either meet the above requirements or be enrolled in a related master's or doctoral degree or have significant related experience.

One of three required recommendation letters should be from the clinical director of training supporting the applicant's potential as a clinical researcher.

MS applicants must identify a University of Minnesota faculty member willing to mentor them through the program prior to applying to the degree. We are unable to assist students with securing a mentor. One of three required recommendation letters should be from the clinical director of training supporting the applicants potential as a clinical researcher.

## APPLICATION DEADLINE

Fall Term deadline: August 1

Spring Term deadline: November 1

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### FOR MORE INFORMATION ABOUT THE EPIDEMIOLOGY MPH PROGRAM:

Kathryn Schwartz-Eckhardt  
Senior Enrollment and Program Development Manager  
Email: schwa139@umn.edu  
Phone: 612-626-8802



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