

## MASTER OF SCIENCE IN **CLINICAL RESEARCH METHODS AND EPIDEMIOLOGY (MS)**

Loyola's Master of Science in Clinical Research Methods and Epidemiology (CRME) program is designed to foster clinical investigation and enable clinicians and other health care personnel at Loyola University Chicago to reach their full potential as clinical researchers. The program includes formal education in epidemiology, biostatistics, clinical trials and grant writing. All students are assigned a research mentor to provide guidance with completion of a clinical research project.

### **PROGRAM STRUCTURE**

The degree offers part-time enrollment. A total of 30 credit hours are required.

*Average time to completion (part-time) 2-3 years*

The MS in Clinical Research Methods and Epidemiology program offers courses on-campus in the evenings, online, or a hybrid form of instruction to provide students with maximum flexibility in their course schedules.

All students follow a core curriculum with an emphasis on Epidemiology and Biostatistics.

### **EXPECTATIONS AFTER GRADUATION**

After graduation, you may use your skills to further your career in clinical research, including conducting independent research and applying for grants through NIH and other funding agencies.

### **PROGRAM DISTINCTIONS**

Epidemiology is considered the basic science of public health as it helps us understand the causes of and solutions to disease states. This program prepares you to design, conduct, analyze, and interpret clinical and population health research.

#### COMPETENCIES ADDRESSED:

- Identify the principles behind public health screening and the uses and limitation of surveillance data.
- Relate social structure and contextual conditions to the health and disease using population-based approaches and systems thinking.
- Develop and test hypotheses through appropriate study design and analytical approaches.
- Identify large, representative data sets for secondary data analysis and apply appropriate statistical approaches to account for study design.
- Identify sources of random variation and systematic bias in data and calculate basic measures of association, e.g., odds ratio, hazard ratio, relative risk, assess effect modification and control for confounding.
- Estimate population characteristics through construction of confidence intervals for prevalence, incidence, risk and measures of association.

- Perform multiple linear regression and logistic regression, power calculations and sample size estimates, and explain the basics of survival analysis.
- Use computer software for basic data management and employ graphical and numerical techniques as analytical tools, e.g., to identify outliers in data.
- Critically evaluate epidemiological report and research publications and effectively communicate epidemiologic information to both lay and professional audiences.

**STUDENT LIFE** The majority of our students work full-time as Loyola University Health System residents and fellows.

**FACULTY** Our faculty are experts in their fields. All hold advanced degrees (PhD, MD, DrPH, or JD). They have a wide variety of clinical and research interests, and are well respected in their areas of professional specialty. Expertise includes health policy, epidemiology, biostatistics, and environmental health.

**PREREQUISITES**

- Current employment as a Loyola faculty member, nurse, resident or clinical fellow
- An advanced academic or professional degree
- Official transcripts from all undergraduate and graduate institutions attended
- A letter of intent, or statement of purpose, describing why you wish to apply for the CRME degree and your future career plans
- At least three letters of recommendation

## LEARN MORE

APPLICATION REQUIREMENTS AND DEADLINES

[gpem.LUC.edu/apply](https://gpem.LUC.edu/apply)

*Admission is on a rolling basis. Tuition remission is available for many current Loyola faculty and medical postgraduates.*

CONTACT INFORMATION

*For further information about academic programs, or to arrange a visit, please contact:*

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*Send all supporting documents to:*

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Loyola University Chicago  
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