

# MATHEMATICS

## MS IN MATHEMATICS

The Department of Mathematics & Statistics offers a flexible course of study leading to a Master of Science in Mathematics. The degree leads to careers in industry, in education, or to further graduate education, whether in mathematics or another discipline. The program is modestly-sized and the student body is diverse in academic backgrounds, in origins, and in professional goals.

### PROGRAM STRUCTURE

Part- and full-time enrollment is possible. Average time to completion is 1.5 years (full time), or 2–3 years (part time). Nine courses are required for graduation, which at full-time load takes three semesters, so 1.5 academic years. Part-time enrollment is possible, and transitioning from full-time to part-time is easy. Start in fall semester is usual; start in spring is possible. There is no thesis or a comprehensive exam requirement.

### EXPECTATIONS AFTER GRADUATION

Recent graduates of the MS in Mathematics program have continued their studies of mathematics at the PhD level, pursued careers in teaching and education, and found employment in industry. Our alumni entered PhD programs at institutions including University of Iowa, University of Virginia, and State University of New York at Albany; secured teaching jobs at institutions like Loyola University Chicago and Central Washington University; and entered the financial, software, or data analysis industries at institutions like Group One Trading, WMS Gaming, Henderson Global Investors, Sling TV, and the Insurance Institute for Highway Safety.

### PROGRAM DISTINCTIONS

The MS in Mathematics program is a flexible and modest-sized program that offers students a selection of courses in pure and applied mathematics. Students can pick mathematics and applied mathematics courses to meet their interests and career goals, and can include a few courses from the graduate program in applied statistics. Students can begin the program in the fall or in the spring semester. The size of the program gives students easy access to and close supervision by the faculty. The student body is diverse in academic backgrounds, origins, and professional goals.

### FACULTY

Mathematics faculty members are both passionate about their teaching and dedicated to their research. Professional faculty members receive recognition for the quality of their research by regularly obtaining competitive grants from agencies such as the National Science Foundation, the Air Force Office of Scientific Research, and the National Security Agency. Areas of faculty interest include calculus of variations, control theory, game theory, optimization, partial differential equations, nonlinear analysis, combinatorics, coding theory, cryptography, knot theory, quantum groups, and representation theory.

## PREREQUISITES

Students are required to have earned a BS or BA degree with a GPA at or above a B, taken the general GRE test, and gained solid background in undergraduate mathematics. This includes 1 year of single-variable calculus, multivariable calculus, ordinary differential equations, introductory statistics, linear algebra, introductory programming, and, ideally, introductory undergraduate courses in abstract algebra and real analysis.

Students missing some of the prerequisites may be admitted conditionally. Students missing the abstract algebra or real analysis prerequisite may be allowed to take these undergraduate courses in their first semester at Loyola as part of their coursework.

International applicants are expected to have earned a score of at least 550 on the TOEFL (paper) examination, 79 on the IBT examination, or 6.5 on the IELTS examination.

## FINANCIAL SUPPORT

The Graduate School has limited funds available for financial assistance, usually in the form of teaching assistantships. Early application is encouraged.

## FINANCIAL AID

Begin the financial aid process by completing your Free Application for Federal Student Aid (FAFSA) at [fafsa.ed.gov](https://fafsa.ed.gov). Financial aid from Loyola's Financial Aid Office will not impact your ability to apply for financial aid through the Graduate School. To learn more about these financial aid opportunities, visit [LUC.edu/finaid/graduateschool](https://LUC.edu/finaid/graduateschool).

## LEARN MORE

### APPLY

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

*For all application requirements and deadlines, please visit [LUC.edu/gpem/info](https://LUC.edu/gpem/info).*

### CONTACT INFORMATION

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*For questions regarding your application or the application process, please contact:*

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