

Doctor of Philosophy Mathematical and Computational Sciences

Degree Program

A minimum of 60 credit hours is required, including

- Mathematics Option: at least 33 hours must be in courses numbered 5000 or above.
- Computer Science Option: at least 45 hours must be in courses numbered 5000 or above.
- Statistics Option: at least 33 hours must be in courses numbered 5000 or above.

Qualifying Examination:

1. Take a written examination, normally within the first 12 credit hours of study in the Ph.D. program.
 - Mathematics Option: Topics from real analysis, complex analysis and linear algebra (Math 4100, 4160, 4450).
 - Computer Science Option: Topics from the theory of programming languages, operating systems, analysis of algorithms, and computer systems (CS 4250, 4760, 5130, 5700).
 - Statistics Option: Topics from real analysis, linear algebra, mathematical statistics I and II (Math 4100, 4450, 4200 and 4210).
2. After passing Step 1, select one of the following (normally within the first 24 hours of study of the program):
 1. Pass a written examination in an approved area of the student's interest.
 2. Write a survey paper in a specialized area under the direction of a member of the graduate faculty and defend it in an oral examination.

Dissertation

All students must defend orally a written dissertation proposal to their dissertation committee. A dissertation embodying the results of original research must be accepted by the Department of Mathematics and Computer Science and the Graduate School.

Emphasis Area

- Mathematics
- Computer Science
- Statistics

Program Website

- <http://www.umsl.edu/mathcs/graduate-studies/phd-math.html>

Application Requirements

1. Graduate School Application
 - a. <http://www.umsl.edu/gradschool/prospective/apply-now.html>
2. Three Letters of Recommendation
 - a. Letters of recommendations from persons qualified to evaluate the student's academic ability are required.
3. Official transcripts from all universities attended
 - a. Applicants must have completed at least a baccalaureate degree before beginning the program.
4. Entrance examinations
 - a. Graduate Record Examination (GRE) (see <http://www.gre.org/ttindex.html>).
 - b. International students are required to document English proficiency by providing scores from an internationally accepted standardized examination before a decision is made on admission.
5. Grade Point Average
 - a. Minimum of 3.0 on 4.0 scale

Application Deadlines

Deadline for receipt of all admission materials

- Fall semester
 - July 1
- Spring semester
 - December 1

Application Fee

\$50 for domestic applicants; \$40 for international applicants

Assistantships

Assistantships are available for outstanding applicants. Please follow instructions to apply at

<http://www.umsl.edu/mathcs/graduate-studies/graduate-information.html>

Math Graduate Program Director

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