Doctor of Philosophy
Mathematical and Computational Sciences

Degree Program
A minimum of 60 credit hours is required, including

- Computer Science: At least 45 credit hours must be in courses numbered 5000 or above. Dissertation Research must account for 9-15 credit hours

Qualifying Examination:
1. Take a written examination, attempted no later than after completing 12 credit hours of study in the Ph.D. program.
   - Computer Science option: Examination covers Operating Systems (Cmp Sci 4760), Advanced Data Structures and Algorithms (Cmp Sci 5130) plus two topics from a list of courses
2. After passing Step 1, select one of the following:
   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 Computer Science and the Graduate School.

Emphasis Area
- Computer Science

Program Website:  [http://www.umsl.edu/cmpsci/graduate-studies/phd-es.html](http://www.umsl.edu/cmpsci/graduate-studies/phd-es.html)

Application Requirements
1. Graduate School Application  [http://umsl.edu/go/Apply-Now](http://umsl.edu/go/Apply-Now)
2. Two Letters of Recommendation
   a. Letters of recommendations from persons qualified to evaluate the student's academic ability or professional experience 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) scores recommended but not required (see [http://www.gre.org/ttindex.html](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
Applications submitted after the deadlines will be considered for admissions on a rolling basis until the beginning of the semester.
Domestic applicants
Fall admission: July 1  Spring admission: December 1  Summer admission: May 1
International applicants
Fall semester: May 1     Spring Semester: October 1

Application Fee
$50 for domestic applicants; $40 for international applicants

Computer Science Graduate Program Director
Dr. Cezary Janikow          Phone: 314-516-6352          E-mail janikowc@umsl.edu