MS and PhD in COMPUTATIONAL SCIENCES
Department of Mathematics, Statistics and Computer Science
Marquette University

PROGRAM DESCRIPTION
Computational Science is the discovery, implementation, simulation, and application of models to solve scientific and engineering problems. The doctoral program is designed for individuals of outstanding ability who show promise as a researcher in an interdisciplinary environment. The diverse research opportunities in our naturally interdisciplinary department are enhanced by the research programs of associated faculty on the Marquette campus in the sciences and engineering and Milwaukee area research laboratories and clinics. Consult the department web site for the most current information.

PREREQUISITES FOR ADMISSION
Admission to the program requires an undergraduate degree in mathematics, statistics, computer science, or a related field such as engineering or an area of science, with at least a minor (3 courses beyond calculus) in mathematics, and proficiency in a high-level computer language. Admission to the doctoral program also requires demonstrated promise for original research.

APPLICATION DEADLINE
January 15

APPLICATION REQUIREMENTS
Applicants must apply online, directly to the Graduate School. They need
1) to complete the online application form and submit the fee.
2) Official transcripts from all current and previous colleges/universities except Marquette.
3) Three letters of recommendation addressing the applicant’s academic qualifications for graduate study
4) GRE scores (General Test only).
5) (For international applicants only) a TOEFL score or other acceptable proof of English proficiency, English-language publications authored by the applicant, including a master’s thesis or essay, if applicable (optional, but strongly recommended).

DOCTORAL REQUIREMENTS
The total program, exclusive of dissertation, will contain a minimum of 45 credit hours of approved course work beyond the bachelor’s degree, including the 18-credit computational sciences core, which consists of MSCS 6010-MSCS 6060, and at least 2 credits of MSCS 6090 (Research Methods/Professional Development). Twelve hours of dissertation credit is also required. Approved programs of study will normally include 6 credits of courses outside the department and no more than 12 credits in 5000 number courses (undergraduate courses that can be taken for graduate credit).

MASTER’S REQUIREMENTS
Completion of MSCS 6010-6060 core (18 hours), an essay, and a total of 30 hours under Plan B. A thesis option (Plan A) is also available.

The Computational Sciences Core
- MSCS 6010, Probability, and MSCS 6020, Simulation.
- MSCS 6030, Applied Mathematical Analysis, and MSCS 6040, Applied Linear Algebra.
- MSCS 6050, Elements of Software Development, and MSCS 6060, Parallel and Distributed Systems.
- MSCS 6090, Seminar on Research Methods/Professional Development.

For more information, please visit: http://www.mscs.mu.edu/mscs/graduate/phd_cs/index.html