

Graduate Certificate in Modeling and Simulation

The Graduate Certificate in Modeling and Simulation program provides the opportunity for professionals and scientists to develop or enhance their expertise in the modeling and simulation field, thus providing additional education and employment opportunities in research, national defense, consulting, health care, entertainment, business, training, or any other field where the use of modeling and simulation can be of value.

Admission Requirements:

- Applicants must show evidence that they are proficient in the core areas of computer science. Should an applicant not be able to provide such evidence, the admissions committee may require the applicant to take CPSC 6105, and make a grade of B or higher.
- Applicants must show evidence that they are proficient in computer programming. Should an applicant not be able to provide such evidence, the admissions committee may require the applicant to take CPSC 6106, and make a grade of B or higher.
- Applicants must show evidence that they are proficient in calculus. Should an applicant not be able to provide such evidence, the admissions committee may require the applicant to take an undergraduate course in calculus and make a grade of C or higher
- Applicants must show evidence that they are proficient in statistics. Should an applicant not be able to provide such evidence, the admissions committee may require the applicant to take an undergraduate course in statistics and make a grade of C or higher.

Proficiency in each of the above areas may be shown by submitting university transcripts documenting the applicant's previous achievements in the area, such as classes that the applicant has passed with a grade of B or higher (or C or higher for calculus and statistics). These achievements also include having earned a BS or an MS degree in computer science from an accredited college or university within the previous five years.

Proficiency in programming (item 2) may be argued for by an applicant by showing evidence of extensive industry experience in developing software.

The admissions committee will evaluate applications for admission to each of the above certificate programs, and make decisions on whether a given applicant may be admitted to the program, and on whether a waiver for CPSC 6105, CPSC 6106, calculus, and/or statistics should be granted.

Course Requirements

1. Required Courses
 - CPSC 6107 (Survey of Modeling and Simulation)
 - CPSC 6142 (Systems Simulation)

2. Choose 3 of the following

- CPSC 5125 (Computer Graphics)
- CPSC 6118 (Human-Computer Interface Development)
- CPSC 6143 (Simulation Project)
- CPSC 6147 (Computer Visualization)
- CPSC 6148 (Simulation and Gaming)

Note: To qualify for this graduate certificate, students must obtain a grade of "B" or better in all courses taken towards this certificate program.