

Modeling and Simulation Certificate

The certificate in Modeling and Simulation will provide post-baccalaureate students with the opportunity to acquire knowledge and skill in the use of computational theories and skills for the development of software models and simulation. The courses in the certificate program may be applied to the M.S. in Computer Science. Students in the certificate program must be admitted to the graduate school, have a bachelor's degree in science or engineering, have taken linear algebra, calculus, discrete math and probability, and be proficient in programming and data structures.

The certificate program consists of 5 courses, to include:

Code	Title	Semester Hours
Core Courses		
CS 581	MODELING & SIMULATION I	3
CS 582	MODELING & SIMULATION II	3
Groups		
Select two courses from one of the following groups:		6
Object-Oriented Programming and Software Engineering:		
MOD 501	SVY MODELING & SIMULATION	
CS 650	SOFT'W ENGINEERING PROC	
Visualization:		
CS 545	INTRO COMPUTER GRAPHICS	
CS 546	ADVANCED COMPUTER GRAPHICS	
CS 548	HUMAN-COMPUTER INTERACTION	
CS 646	COMPUTER GEOMETRY MODELING	
Information Systems:		
CS 530	EXP SYS/HEURISTIC PROGRAMMING	
CS 553	CLIENT/SERVER ARCHITECTURES	
CS 630	ARTIFICIAL INTELLIGENCE I	
CS 670	COMPUTER NETWORKS	
CS 687	DATA BASE SYSTEMS	
Additional Course		
Select one additional course from those listed above, or an approved domain course		3
Total Semester Hours		15