

Certificate

Modeling and Simulation - Health Sciences Certificate

The Modeling and Simulation in Health Sciences certificate program is designed for students to develop competency in the use of modeling and simulation theory, methods and technologies to support health sciences research, policy-making, and training in the health care domain. The core course of this program covers the basic knowledge of Modeling and Simulation while the other three courses focus on the applications of M&S in health care related fields.

This program is targeted to graduate students interested in pursuing a career in modeling and simulation in health care or graduate students enrolled in the PhD program at the College of Health Sciences who desire to focus their research and/or course of study in modeling and simulation. The expected time to complete the certificate is four semesters.

Admission

Admission to this certificate program requires a bachelor's degree (or equivalent) and a previous knowledge of calculus and statistics. The basic certificate requirements are four three-hour courses for a total of twelve required credits. The basic simulation core class called Introduction to Modeling and Simulation of three credits is required, plus nine credits of discipline specific classes. A 3.00 GPA for the four-course sequence is required for successful completion. Total amount of credit: 12.

Curriculum Requirements

MSIM 601	Introduction to Modeling and Simulation	3
HSR 815	Decision Analysis in Health Care	3
Discipline Specific Class		3
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Total Credit Hours		12

Since Modeling and Simulation is a highly multidisciplinary science, other colleges can offer discipline specific classes, such as:

BIOL 772	Modeling and Simulation in the Life Sciences	4
PSYC 731	Human Cognition	3
BIOL 732	GIS in the Life Sciences	3
BNAL 722	Agent-Based Simulation and Modeling	3