Queens College

Computer Science 381

Simulation and Modeling, Spring 2017

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**Course Objectives**  
The course objectives:

* understand the way the way discrete event simulation can be used to gain insight into a problem;
* provide an understanding of the computational aspects of simulation programs;
* ability to write simulation programs and analyze the results

**Overview of the Syllabus**

*Introduction*

Digital simulation is used by many people in their job to model a system. It is easy to make use of but requires some statistical understanding to interpret and get the appropriate results.

## Course Grading

* class participation 20%
* midterm 15%
* Projects 35%
* quizzes 10%
* Final 20%

Textbooks

Required: Discrete-Event Simulation: A First Course, Lawrence Leemis, Steve Park, Pearson Prentice, 2006

Suggested: Discrete-event system simulation, fifth edition, Jerry Banks, John S Carson II, Barry L. Nelson, David M. Nicol, Prentice Hall, 2010

Learning Outcomes

* Demonstrate how tools of simulation can be used to analyze problems and develop solutions.
* Identify and apply the fundamental concepts and methods of simulation and the technology that enables it.
* Be able to articulate and evaluate the impact of simulation techniques vs other techniques such as analytic modeling

The course will follow CUNY’s policy on academic dishonesty.