OPER 428 Stochastic Operations Research
Fall 2019: MWF 10:00 – 10:50 am, Harris Hall 4155

Prerequisites: (Undergraduate level CMSC 245 Minimum Grade of D or Undergraduate level CMSC 255 Minimum Grade of D) and Undergraduate level STAT 309 Minimum Grade of D and Undergraduate level MATH 310 Minimum Grade of D.

Instructor: Ye Chen, ychen24@vcu.edu, Harris Hall 4140.


Course Description: Introduction to topics in discrete-event and Monte Carlo simulation including the application of probabilistic models in real-world situations, random number generation, random variate generation and Monte Carlo integration.

Grading Policy: Homework (30%), Midterm 1 (15%), Midterm 2 (15%), Midterm 3 (15%), Final (25%). Justify all your work with enough details for homework/quizzes/projects/exams in order to receive full credit.

Additional Recommended References:

Course Outline:
Probability Review
Introduction to Simulation
Discrete-Event Simulation
Queueing Models
Selecting Input Probability Distributions
Programming Simulation
Output Data Analysis

Monte Carlo Simulation
Monte Carlo Models
Random Variate Generation
Monte Carlo Integration

Important Dates: Withdrawal Deadline, Friday, November 1.
Midterm 1, Wednesday, September 25.
Midterm 2, TBD.
Midterm 3, TBD
Final Exam, TBD.
Course Software: R.

Late Assignments: Assignments that are turned in late will receive a grade of 0.

Absences: Students that miss class are responsible for learning the material that is covered in class and for making up all work missed, regardless of the reason for the absence. In the event of an emergency, students must notify the instructor before the exam and provide legitimate excuse/evidence. A grade of zero will be assigned for test missed as a result of unexcused absence. Students must also abide by any administrative decisions (e.g., quiz dates) made by the class in his/her absence.

Academic Integrity: No collaboration is allowed on homework/quizzes/projects/exams, including take-home ones. Cheating will not be tolerated. Students that fail to comply with the Student Code of Conduct (https://conduct.students.vcu.edu/), will be subject to maximum university penalties.

Special Considerations: Students are responsible for providing current documentation of any disability or other concern that requires special instructional accommodations. Further, students should notify the instructor on the day of first class of any special considerations.

Calculator: Students wishing to use a calculator during a quiz or test are responsible for bringing the calculator or making arrangement with the instructor prior to the date of the quiz or test.