Instructor
Henry Lam
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Office: Mudd 312
Office hours: TBA

Teaching Assistant
TBA

Lectures
Time: Tue, Thu 5:40-6:55pm
Location: TBA

Prerequisites: Understanding of single and multivariable calculus. Students are also expected to have sufficient knowledge in:
- Probability: Discrete and continuous distributions, independence and conditioning, Bayes’ rule, expectation and variance, law of large numbers, central limit theorem
- Simulation: Basic methods such as inverse transform, acceptance-rejection or otherwise are recommended to take IEOR4101.

Textbook
There is no required textbook. A recommended reference is Introduction to Probability and Statistics for Engineers and Scientists (5th edition) by Sheldon M. Ross, Elsevier.

Course Summary
Decision making in an uncertain environment is one of the most fundamental tasks in modern management sciences. Imagine yourself as an Amazon department manager who needs to decide how to stock up at various distribution centers, or as a management consultant who helps a manufacturing firm decide how much to invest in a new plant capacity. In instances like these, you need to make decision likely based on a combination of data analysis, probabilistic reasoning, and the use of scientific computation. This course equips students with basic knowledge in these related areas.

Topics covered
Statistics, built on knowledge in probability and simulation depicted in the prerequisites. This includes: Point and interval estimation, hypothesis testing, regression.

Grading
Homework (20%)
Final (80%)

Course Components
Homework:
• Weekly or bi-weekly.
• No late assignment is accepted. The lowest scored assignment will be dropped from calculation in the final grade.
• Discussion among students on the assignments is encouraged. However, every student should complete the assignments on his/her own.

Final:
• Date: TBA
• Closed-book, but you are allowed to bring two sheets (four pages) of notes