IE 302
Stochastic Models in Operations Research

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Class Hours:

- Section A: Wednesday 12:40-14:30 (FMAN 1099), Thursday 10:40-12:30 (FENS G035)
- Section B: Wednesday 9:40-11:30 (FENS G032), Thursday 13:40-15:30 (FENS G032)

Recitation Hours: Wednesday 17:40-19:30 (FENS L067, L065, FASS G056); Thursday 15:40-17:30 (FENS L061, L058, G029)

Teaching Assistants and Office Hours:

- Soner Aydin (soneraydin@sabanciuniv.edu); TBA
- Malek Ebadi (malek@sabanciuniv.edu); TBA
- Elifnas Ertekin (elifertekin@sabanciuniv.edu); TBA
- Aysun Mutlu (aysunmutlu@sabanciuniv.edu); TBA.

Course Description and Objectives: The mission of this course is to continue the study of modeling and solution of decision problems using operations research techniques with a particular emphasis on stochastic aspects.

Course Outline

1. Markov Chains
   - Discrete time Markov chains
   - Continuous time Markov chains
2. Queueing Theory
Queueing models based on the birth-and-death process
• Other queueing models

3. Dynamic Programming (if time permits)
• Deterministic dynamic programming
• Probabilistic dynamic programming

Recitations
During the recitations, we will cover some of the assignment solutions in detail, and additional questions will be solved. If necessary, topics covered previously in class may be reviewed.

Grading and Make-up Policy

1. Homeworks will be assigned regularly. Solutions will be provided, but homeworks will not be graded. We strongly recommend that you complete the assignments individually. It will pay off in the exams.

2. Midterm 1 (30%); March ?, 2018 (Location: ?)

3. Midterm 2 (30%); April ?, 2018 (Location: ?)

4. Final (40%).

5. There will be a single comprehensive makeup exam after the final. Your makeup grade will replace your missing grade(s). The only acceptable reasons for missing an exam are medical illnesses (with medical reports) or family emergencies. If you will not be able to take an exam on time, you have to let the instructor know before the exam. However, if you have a medical reason documented/approved by the health center, you do not need to inform the instructor as the health center directly e-mails the information to all instructors of the student.

The specific exam rules (no cell phone, etc.) will be announced before each exam.

Textbook

Other Notes
• All content, assignments, announcements, etc., will be administered through SUCourse.

• Students are responsible for all announcements made during the lecture hours and recitation hours, on the SUCourse website and through e-mails by the instructor and/or the TAs.

• No “extra” opportunity is provided to increase an individual student’s course grade.

This document may be modified during the semester (Spring 2018) due to unforeseen reasons. Students are responsible for such modifications that will be announced during the lectures and at the SUCourse website.