

IEE 470/598: Syllabus & Course Policies  
Stochastic Operations Research – Fall 2012  
Instructor: Dr. Soroush Saghafian

**Instructor**

Dr. Soroush Saghafian, [Soroush.Saghafian@asu.edu](mailto:Soroush.Saghafian@asu.edu)  
Office Hours: Fridays, 4:00-5:00, BYENG 336, others strictly by appointment

**TA**

Aysegul Demirtas, [ademirt2@asu.edu](mailto:ademirt2@asu.edu)  
Office Hours: Mondays and Wednesdays, 9:00AM – 10:20AM, BYENG 313

**Lectures**

Tuesdays and Thursdays, 3:00PM – 4:15PM, DISCVRY 350

**Exams**

Midterm: October 23, 3:00PM – 4:15PM, DISCVRY 350 (In Class)  
Final: December 11, 3:00PM – 4:15PM, DISCVRY 350 (In Class)

**Required Text Book**

Ross, S. M., Introduction to Probability Models, 10<sup>th</sup> Edition, Academic Press.

**Supplemental Texts (Recommended, Not Required)**

Pinsky, M. A., and Karlin, S., An Introduction to Stochastic Modeling, 4<sup>th</sup> Edition, AP, 2011.  
Bertsekas, D. and Tsitsiklis, J., Introduction to Probability, 2<sup>nd</sup> Edition, Athena Scientific, 2008.  
Tijms, H. C., A First Course in Stochastic Models, Wiley, 2003.  
Solberg, J., Modeling Random Processes for Engineers and Managers, Wiley, 2008.

**Prerequisites:**

Basic knowledge in probability, statistics, operations research, and math (e.g., IEE 380, IEE 376).

**Grading:**

- Homework: 25%
- Midterm: 35%
- Final: 40%

**Course Description**

The main objective of the course is to provide you with mathematical modeling tools to quantify randomness, and make decisions under uncertainty. Emphasis will be on the basic topics of probability modeling, stochastic processes, and their applications. The course requires a lot of abstract thinking, modeling, and analysis.

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### Core Contents

The course will provide introductions to various topics such as fundamentals of probability theory, conditional probability, discrete and continuous random variables, Markov chains, Poisson processes, and queuing theory.

### Class Policy

1. Classes will consist of lecturing, active and collaborative learning exercises, and discussions. Solving the homework problems and class participation are both very important for learning the material. Hence, it is important that you participate in the class and also spend enough time to work on the homework. Most concepts will build on top of topics covered in previous lectures, so missing lectures or homework will have very serious consequences throughout the semester. We will use ASU's Blackboard system to post lecture notes, assignments, etc. You should always be prepared to take organized notes since the class notes will sometimes be available after the lecture is delivered.
2. Assignments are due before the lecture starts on their due dates. Late submitted materials will not be graded.
3. It is imperative that you come to class in a timely fashion. We have a big class, which makes it hard to get organized before each class. Furthermore, it disrupts the lecture and the learning environment to have latecomers to the classroom.
4. Use of electronic equipment (such as laptops, tablets, iPods, cell phones, etc.) is not allowed in the classroom unless the instructor is notified in advance that you use such devices to take notes. Please turn off and store all electronic equipment before entering the class room.
5. If you have to miss an exam, you will receive a grade of "0" for that exam unless you have a doctor's documentation of illness. A card from the health center saying that you visited the health center does not count as a doctor's report; The instructor need to see a report that clearly states that you were not in a physical condition to take the exam at the scheduled date/time.

### Re-grade Policy

If you think that there has been an error in the grading of your assignment or exam, you have one week from the day it was returned to you to submit it for a re-grade. (Note: one week is counted from the day the homework became available; you do not get an extension if you chose to pick it up late!) When you resubmit the assignment, it must be accompanied by a clear written explanation of the suspected grading mistake. Re-grading entails re-grading the entire assignment or exam; so you

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may, in fact, get a lower grade than your original grade. All the regarding request should be directly given to the TA during her office hours.

**Email**

All emails to the Instructor and/or TA must have either **[IIE 470]** or **[IIE 598]** in the subject line. Failure to place this in the subject line could cause your email not to be read. Email is the convenient way to get in touch with the instructors to get an answer to a short question. However, be aware that the professor and the TA have many other work obligations and probably keep different schedules from you. Therefore, although we do guarantee that we will answer all emails we receive, you should not expect us to answer each of them right away. The most reliable way to get your questions and concerns answered is to attend office hours: keep up with lectures and readings and get started on assignments early, to be prepared to pose questions in office hours.

**Academic Integrity**

Incidences of cheating will be reported to the Dean's Office with a recommendation that you receive an "E" in this class. ASU has very severe penalties for academic integrity violations. ASU's policy can be found online. You must observe this policy with respect to examinations, assignments, and all other aspects of this course. In particular:

Homework: All parts of each assignment should be solved individually. Any help from internet, friends, etc. is strictly prohibited. However, you are encouraged to attend the TA's office hours to actively discuss the problems and your thoughts.

Exams: Both exams will be closed book. You will be allowed to bring one page of your own notes and a calculator to perform simple arithmetic operations; details to follow.