Probability, Statistics, and Random Processes

EE 351K, Unique 15740, Spring 2018, UT Austin

Instructor

François Baccelli, francois.baccelli@austin.utexas.edu

Objectives

This course serves as introduction to probability, statistics and random processes for engineers. It will focus on the fundamental concepts and simple applications of probability models and estimation to computer and communication systems, algorithms (e.g. web search), and logistics, data mining etc.

Prerequisite

EE 313 with a grade of at least C or Mathematics 427J or 427K with a grade of at least C-.

Textbook

Introduction to Probability, Dimitri Bertsekas and John Tsitsiklis, Athena Scientific, 2nd edition, 2008. Homeworks may be derived from the text and the associated material (e.g. instructor manual).

Online Platform

Homework and related class material will be posted on Canvas. We will be using Piazza, an online discussion platform, for posting and answering questions regarding the course material, homeworks etc. We will also be using Gradescope for convenient electronic submission and grading of homeworks as well as grading of exams.

Course Expectations

Attendance is expected. You are responsible for material covered in class (some of which is not in the text book) and in the reading assignments in your book (even if not covered in class). My lectures should be clear. If you find a particular lecture difficult, give me some feedback. You are highly encouraged to form study groups and discuss material and homework with other students, but you should not be simply copying from others. University disciplinary procedures will be invoked if any form of cheating is detected.

Homework

Homework will be assigned weekly. You will need to scan your homework and submit it electronically via Gradescope before 12 midnight on Thursday when it will typically be due. Late homework will not be accepted. You will need to create a Gradescope account. The entry code for Gradescope is 9747RP. Details on the (pdf) scanning and uploading the homework will be provided in the first homework. There are 12 homework sets. The lowest scoring homework will be dropped when computing your overall grade.

Exams

There will be two in class mid-term exams and a final exam which are scheduled for the following dates:

- Midterm 1: In class, Thursday, February 15 (tentative).

- Midterm 2: In class, Thursday, March 29 (tentative).

- Final: to be scheduled by the office of the registrar.

These exams are closed book, however you are allowed to bring a single cheat-sheet (8.5 x 11 inch paper). You can write on both sides. The material on the cheat sheet needs to be handwritten and not photocopied. I will not be creating make-up exams under any circumstances. Thus if you miss a midterm exam, you need to let me know prior to the exam, and will need to provide official and convincing documentation (i.e., university student services, or health services) to be excused. e.g., a written note addressed to me on your behalf by a professional whom I can call to verify the circumstance you are in. I will determine if the absence is excused on a case-by-case basis. If you have an excused absence for an exam, your exam score will be calculated as the weighted average of the other mid-term exam and final scores based on their relative weights. Unexcused absences will result in zero points for the exam. If you miss the final exam you will be assigned a zero on the final.

Grading

The relative weights will be: Homework: 15%, Midterm 1: 25%, Midterm 2: 25%, Final exam: 35%. The overall course grade will be based on a curve.

Class Place and Time

BUR 116, TTH, 3:30–5:00 p.m.

Teaching Assistant

Graduate: Nihal Sharma, nihal.sharma@utexas.edu
Undergraduate: Jayaj Poudel jayajp8@gmail.com

Office Hours:

- Instructor: TTH, 11–12 am, and Wed. 11–12 am in EER 6.886.

- Graduate Teaching Assistant: Mon. 10.30 11.30 am, Wed. 4–5 pm and Thu. 10-11 am, room TBA.

- Undergraduate Teaching Assistant: Mon. 3.30–4.30, TTH, 5.30–6.30 pm, room TBA.

Refer to Canvas for rooms.

Academic Adjustment

If you have any questions regarding the notices below, please contact appropriate offices as detailed below.

"Academic adjustment: The University of Texas at Austin provides, upon request, appropriate academic adjustments for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-4241 TDD or the College of Engineering Director of Students with Disabilities at 471-4321."