

Math 180A

Introduction to Probability

Fall 2012

This course is an introduction to the basic ideas and techniques of Probability Theory. (It also serves as a prerequisite for Math 180B and for Math 181A.) The discussion begins with the basic properties of probability spaces, and some elementary combinatorics. We then discuss random variables in a discrete setting, including their means, standard deviations, and distributions. After this, you'll have a chance to exercise your calculus skills when we turn to the story of random variables with continuous distributions, in one and several dimensions. Along the way we encounter two theorems that are fundamental to the subject: the Law of Large Numbers and the Central Limit Theorem.

We shall be using the text *PROBABILITY* by J. Pitman. I plan to discuss most of the material contained in chapters 1 through 5 of the text. Time permitting, we may see some of Chapter 6.

- Lectures will be on Monday, Wednesday and Friday, from 3 to 3:50 PM, in HSS 1330.
- Discussion sections with your TA meet on Thursdays according to the following schedule:
 - **Section A01:** 4 to 4:50 PM, U413
 - **Section A02:** 5 to 5:50 PM, U413
 - **Section A03:** 6 to 6:50 PM, U413
 - **Section A04:** 7 to 7:50 PM, U413
- Your course grade will be based on your performance on the two midterm exams and the final exam. These exams will be weighted as follows:
 - Midterm 1: 20%
 - Midterm 2: 25%
 - Final: 40%
- In addition there will be weekly homework assignments which in total will account for the remaining 15% of your grade. These assignments will be due at the end of your Thursday section meeting. Alternatively, you may deposit your homework paper in your TA's homework drop box, located in the basement of APM (turn left upon exiting the elevator or the stairwell); homework turned in this way must be deposited in the homework drop by 8 PM on the Thursday on which it is due.
- The midterm exams will be given in class on Friday, October 26 and Wednesday, November 28.
- The +/− grading system will be used for course grades.

Instructor: P. Fitzsimmons, Office: AP&M' 5715, email: pfitzsim@ucsd.edu, phone: 534-2898, Office hours: MWF 1-2 PM, or by appointment.

TAs:

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This handout and other course information is available at the URL

<http://math.ucsd.edu/~pfitz/fall12/180a/>