Math 180A

Introduction to Probability

Winter 2015

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 10 to 10:50 AM, in Pepper Canyon Hall 122.
- Discussion sections with your TA meet on Mondays according to the following schedule:
  - **Section A01:** 6 to 6:50 PM, APM B402A
  - **Section A02:** 7 to 7:50 PM, APM B402A
  - **Section A03:** 5 to 5:50 PM, APM B402A
- 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%

  You will have the option of substituting your final exam score for *one* of your midterm scores.
- 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 on Tuesdays at 6 pm in your TA's homework drop box, located in the basement of APM (turn left upon exiting the elevator or the stairwell); homework may also be turned in at your section meeting on the Monday before the homework due date.
- The midterm exams will be given in class on Friday, January 30 and Friday, February 27.
- 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 Noon–1:00 pm, or by appointment.

TAs:

Stephan WEISPFENNIG (Sections A01, A02), Office: APM 6446, email: `sweispfe@ucsd.edu`
Michelle BODNAR (Section A03), Office: APM 6446, email: `mbodnar@ucsd.edu`

This handout and other course information is available at the URL

`http://math.ucsd.edu/~pfitz/winter15/180a/`