Math 180C

Introduction to Stochastic Processes, II

Spring 2016

The introduction to stochastic processes begun in Math 180B continues in Math 180C with the study of Markov chains in continuous time and renewal processes. These topics generalize the notion of Poisson process in two different ways. We will then proceed to an introduction to the Brownian motion, one of the two building blocks of the subject of stochastic processes (along with the Poisson process). Time permitting, we will take up some topics in the theory of queues (waiting lines) as an application of the preceding material.

The required text for Math 180C is An Introduction to Stochastic Modeling (Fourth Edition) by M. Pinsky and S. Karlin. I plan to discuss most of the material contained in chapters 6, 7, and 8 of the text, with selected topics from chapter 9.

- Lectures will be on Monday, Wednesday, and Friday, from 9 PM to 9:50 PM in Center Hall 105.
- The discussion sections meet on Tuesdays according to the following schedule:
  - Section A01: 5 PM to 5:50 PM, APM B402A
  - Section A02: 6 PM to 6:50 PM, APM B402A
  - Section A03: 7 PM to 7:50 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: 25%
  - Midterm 2: 25%
  - Final: 35%

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 Thursdays 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 Wednesday before the homework due date.
- The midterm exams will be given on the Friday of the fourth and eighth weeks of the term (April 22 and May 20).
- The +/- grading system will be used for letter grades.

Instructor: P. Fitzsimmons, Office: AP&M’ 5715; email: pfitzsim@ucsd.edu; phone: 534-2898; Office hours: MWF 10-11 AM, MW 1-2 PM, or by appointment.

TAs:
  - Zhelhua Li (Sections A01), Office: APM 6444, email: zhl033@ucsd.edu
  - Michael Conroy (Sections A02, A03), Office APM 2313, email: meconroy@ucsd.edu

This handout and other course information is available at the URL
http://math.ucsd.edu/~pfitz/spring16/180c/