Course Syllabus
EE 465 – Probability
USC, Spring 2012

I. COURSE INFORMATION

Instructor:
Michael J. Neely (EEB 520, mjneely@usc.edu, 213-740-3505)
Office Hours: Tu/Th 3:45-5:30pm (EEB 520)

Note 1: When emailing myself or the TA, please include “EE 465” in the subject.
Example subject: “EE 465: Question about problem 2.”

Note 2: All non-DEN students are required to attend instructor office hours at least once during the semester (either during regular office hours, or by appointment). All DEN students are required to email the instructor at least once regarding a course related question or comment.

Teaching Assistant:
TBA
Office Hours: TBA

Class Location and Time:
Lectures: Tu/Th 12:30-1:50pm (OHE 100c)
Discussion: Friday 9-9:50am (OHE 132)

Electronic Documents and DEN:
Electronic documents for this course will be routinely available on the DEN website: http://den.usc.edu/

Textbook:
This course will use the textbook Introduction to Probability Models by Sheldon Ross (10th edition).

Grading:
There will be problem sets (roughly one every week), 2 mid-terms, and a final, with overall weights to the total score:
Homework/Participation: 20%, Midterm1: 25%, Midterm2: 25%, Final: 30%
The following minimum letter grades are guaranteed to students scoring within the specified intervals: 85-100 A, 75-85 A-, 65-75 B+, 55-65 B. The above thresholds may be adjusted at the end of the semester at the discretion of the instructor. Any such adjustments will be in favor of a higher letter grade. Class participation may also factor into the homework score. There may be occasional pop quizzes given in class, worth points toward the homework/participation score.

Exam Dates and Times:
Midterm 1: Thursday, Feb. 16, 12:30-2:30pm (location TBA)
Midterm 2: Thursday, April 5, 12:30-2:30pm (location TBA)
Final Exam: Wednesday, May 12, 2-4pm (location TBA)
You are expected to make all of these exam times! Note that effort will be made to reserve a classroom to allow for 40 minutes extra time in Midterms 1 and 2, unless there are strong objections. The final exam will be cumulative (covering all topics), but will focus on material not covered in the previous exams.
Statement for Students with Disabilities:
Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.-5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

Statement on Academic Integrity:
USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect ones own academic work from misuse by others as well as to avoid using anothers work as ones own. All students are expected to understand and abide by these principles. Scampus, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: http://www.usc.edu/dept/publications/SCAMPUS/gov/. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: http://www.usc.edu/student-affairs/SJACS/.

Plagiarism (copying or modifying someone else's work and presenting it as your own) and other forms of cheating will not be tolerated. Please ask the TA or instructor if you have questions about proper behavior.

II. Special Days
Monday Jan. 16 (MLK), Monday Feb. 20 (Presidents' Day) , March 12-17 (Spring Recess). Classes end April 27. Final Exam: Wednesday May 12, 2-4pm. Midterms 1 and 2 Thursday Feb. 16 and April 5.

III. Topics
Countable and Uncountable Sets, Outcomes, Events, Probabilities
Conditional Probabilities, Independence
Counting, Playing Cards and Balls and Bins
Baye’s Rule, Random Variables, CDFs and PDFs
Functions of Random Variables, Expectations, Iterated Expectations
Law of Large Numbers
Central Limit Theorem and Gaussians
Hypothesis Testing, Minimum Mean Square Distortion
Discrete Time Markov Chains
Discrete Time Queues, Simulation
Continuous Time Chains
Poisson Processes, M/M/1, Renewal Theory

Note: Due to conference travels, I may need to reschedule one or two classes (and the corresponding office hours). The rescheduled class date/time will be announced in advance. You are encouraged to attend the rescheduled lecture. It will also be taped on DEN for those who are unable to attend.