

MATH 6241 SYLLABUS

Fall 2013

Course Number and Name: Math 6241–Probability I

Lecture: TR 9:35-10:55am (Skyles 269)

Instructor: Pr. Karim Lounici–Skiles 228
Email: klounici AT math.gatech.edu

Course Web Material: All material and announcements will be distributed through t-square

Office Hours: TR 4:00 to 5:00pm or by appointment.

Contacting me: You can contact me by email.

Prerequisites: Math 6337

Course Outline: This class introduces the rigorous mathematical framework of probability theory and is intended for students with a strong background in mathematics (Real analysis, measure theory, algebra). Topics of this course include measure and integration foundations of probability, distribution functions, convergence concepts, laws of large numbers and central limit theory. (1st of two courses)

Textbook: Lecture notes will be provided. There is also a wealth of great textbooks and exercises, some available online for free. In particular, you are strongly invited to consult the following references:

- Grimmett and Stirzaker, *Probability and Random Processes*
- Durrett, *Probability: Theory and Examples*
- Grimmett and Stirzaker, *One Thousand Exercises in Probability* (Great workout!)

Some course notes:

- Scott Sheffield, here.
- Amir Dembo, here.

Grading Policies: There will be two midterms and one final exam. In addition, homework will be provided on each topic studied in this class. Homework will not be graded but solution will be provided in class during tutorial sessions throughout the semester. It is extremely important to work on homework on your own PRIOR to these sessions. Active participation during these sessions and in class will be graded. The (tentative) final grade will be based on the following rules:

Midterm 1: 30%, Midterm 2: 30% Final : 35%, Active participation : 5%

Letter grades will be based on the accumulated points according to the standard cutoffs: A:90-100, B:80-89, C:70- 79, D:60-69, F:0-59. There will be make up tests ONLY for institutionally approved activities and illness. Official document is required as proof.

Important dates: Tentative Test 1 date: September 17th; Last day to drop out from class with grade *W*: October 11th

Honor Code: All students are expected to comply with the Georgia Tech Honor Code. Any violations of the Georgia Tech Honor Code will be submitted directly to the Dean of Students. The Georgia Tech Honor Code is available at <http://www.honor.gatech.edu/>.