

MATH 310T, SPRING 2013
MIXING TIMES OF MARKOV CHAINS

OLENA BLUMBERG

1. SYLLABUS

- **Text:** None. You're expected to use your notes.
- **Instructor:** Olena Blumberg
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olenab@math.utexas.edu
- **Office hours:** 11:00 – 12:00 on Thursday; 11:30 – 12:30 on Friday.
- **Overview:** This course has the following goals:
 - (i) To learn about random walks and their mixing times.
 - (ii) To learn to simulate random walks using Matlab, and use these simulations to study the behavior of the walks.
 - (iii) To get experience doing original research in mathematics.
- **Prerequisites:** None.
- **Grading policy:** The final grade will be determined based on:
 - (i) Attendance and participation, 10%,
 - (ii) Homework, 20%,
 - (iii) Weekly quizzes, 30%,
 - (iv) A final project and presentation, 40%.Plus/minus letter grades will be assigned.
- **Homework policies:** Homework will be assigned every Monday, and collected in class the following Monday. Late homeworks will not be accepted.

I encourage working together to solve the homework problems. However, do not write down anything that you do not understand. A good rule of thumb is that if your homework was destroyed by fire, it should be easy for you to rewrite it without help from anyone else.
- **Quizzes:** There will be a quiz every Friday, starting the second week of classes. The quizzes will be cumulative, but with a focus on the material covered the week before.
- **Attendance:** You're expected to attend every class and participate in the class discussions. I will start taking attendance the second week of classes.
- **Final project and presentation:** During the term, you will get to choose a final project, which will involve learning a new technique and then applying it to an original research problem. You will present your results to the class at the end of the term.

- **Class web site:** Handouts, homework, and other miscellaneous announcements will be posted to the class website at:
<http://math.utexas.edu/~olenab/s13-310T.html>
- **Students with disabilities:** The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-6441 TTY.

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