Statistics 886 - Fall 2013

Stochastic Processes & Applications.

Instructor: Shlomo Levental, C420 Wells Hall, Tel: 3558727. Email: levental@stt.msu.edu.

Time and Place: M, W, F, 12:40-1:30, A316 Wells Hall

Office Hours: M, W, 2:30-3:20

Objective: The purpose of the course is to teach basic theory and applications of stochastic processes. This subject is very useful in all sorts of areas like: Engineering, Computer Science, Economics, Finance and insurance, Biology, etc. The goal is that by the end of the course the student will master some basic techniques and examples.

Important Remark: Some of the material is required for certain exams of the society of actuaries (SOA).

Description of the course: The course will cover the following topics:
1. Brief review of Probability Theory
2. discrete-time Markov chains.
5. Renewal Theory and its applications.
6. Basic Queuing Theory
7. Brownian motion.

Prerequisite: Statistics 441 or similar course.

Text book: Introduction to Probability Models by Sheldon M. Ross (10th edition). A more advanced material can be found in Stochastic Processes by the same author.

Homework: There will be homework assignments throughout the semester. The students are expected to submit the assignments by the due date.

Remark: Some changes in the above are possible.
Important Dates for Fall Semester, 2013:

- August 28  First Day of Classes
- September 4, 8:00 pm  Close of Adds
- September 2  Labor Day (University Closed)
- September 23  End of 100% Refund
- October 16  Middle of Semester; Deadline to drop with no grade
- November 28 – 29  Thanksgiving Holiday (University Closed)
- December 6  Last Day of Classes