Statistics 886- Fall 2015

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, C506 Wells Hall
Office Hours: M, W, 10:30-11:20 am

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: STT 441/STT861 or similar Probability based calculus 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.
In class assignments: There will be some classes in which you will be asked to solve some problems. Those times and the material on which the problems will be based will be known in advance.

Grading: It will be based on homework and the in class assignments.

Remark: Some changes in the above are possible.

Important Dates, Fall Semester, 2015
September 2, 2015 First Day of Classes
September 7, 2015 Labor Day – Official Holiday/University Closed
September 9, 2015 Open adds end (8:00 pm)
September 28, 2015 Last day to drip with refund (8:00 pm)
October 21, 2015 Middle of Semester (Deadline to drop with no grade)
November 26 & 27 Thanksgiving Holiday