STAT 380
Introduction to Stochastic Processes

Spring 2011
Day Course

Students requiring accommodations as a result of disability, must contact the Centre for Students with Disabilities 778-782-3112 or csdo@sfu.ca

Instructor: Scott Pai (Surrey)

Prerequisite:

STAT 280 or STAT 285 and MATH 251 or consent of the instructor. Students with credit for STAT 490 or MATH 495 taken in 2003-3 may not subsequently receive credit for STAT 380.

Textbook:

Introduction to Probability Models (10th Edition) by: S.M. Ross; publisher: Academic Press

Calendar Description:

Review of discrete and continuous probability models and relationships between them. Exploration of conditioning and conditional expectation. Markov chains. Random walks. Continuous time processes. Poisson process. Markov processes. Gaussian processes. **Quantitative.**

Outline:

1. Review: Chapters 1,2,3
2. Discrete Time Markov Chains
3. Poisson Processes
4. Continuous Time Markov Chains
5. Monte Carlo Generation of Random Numbers
6. Some applications

Computing requirements:
There may be a computational component to this course; details have yet to be determined.

Grading Scheme:

Homework Assignments – 15%
Midterm – 40%
Final – 45%
Students must pass the final exam in order to pass the course.
The grading is subject to change.

Students should be aware that they have certain rights to confidentiality concerning the return of course papers and the posting of marks. Please pay careful attention to the options discussed in class at the beginning of the semester. Students are reminded that Academic Honesty is a cornerstone of the acquisition of knowledge. Scholarly integrity is required of all members of the University. Please consult the General Guidelines of the calendar for more details.

Revised December 2010