



# STATISTICS 380-3 INTRODUCTION TO STOCHASTIC PROCESSES

Spring 2004  
DAY COURSE

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*Students requiring accommodations as a result of disability, must contact the Centre for Students with Disabilities 604-291-3112 or csdo@sfu.ca*

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**Instructor: Dr. J. Graham**

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**Prerequisites:**

STAT 285 or STAT 280 and MATH 251 or consent of the instructor.

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**Textbook:**

*Introduction to Probability Models* (8th Edition) by: S.M. Ross; publisher: Academic Press

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**Course 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.

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**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.

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**Grading:**

To be announced first day of class.

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*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 by all members of the University. Please consult the Calendar for details.*

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Revised October 2003