

**Math 303      Introduction to Stochastic Processes      Spring 2014**

Mon Wed Fri, 9:00 – 9:50, Buchanan A202

**Instructor:** D. Brydges,  
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**Office hours:** Mon. 3:00–3:50p.m., Wed. 1:00–1:50p.m., Fri. 10:00–10:50a.m.,  
or by appointment.

**Course webpage:** <http://www.math.ubc.ca/~db5d/math303/assignments.html>.

**Prerequisites:** One of MATH 302, STAT 302.

**Text:** The course text is S.M. Ross, “Introduction to Probability Models,” 10th edition, Academic Press, (2010). Earlier editions are indistinguishable for our purposes apart from possible changes to page and problem numbers. An optional more advanced reference is G.R. Grimmett and D.R. Stirzaker, “Probability and Random Processes,” 3rd edition, Oxford, (2001). There are interesting resources at: <http://www.math.uah.edu/stat/>

**Outline:** The course will be based primarily on topics from Chapters 4,5,6 of Ross. The main topics are:

1. discrete time Markov chains
2. exponential distribution and Poisson process
3. continuous time Markov chains

**Homework:** Nine assignments will be given and marked for credit. Assignments are due at the beginning of class on the due dates specified on the class website. No late assignments will be accepted.

**Tests:** There will be two 50-minute tests held during the regularly scheduled class hours on the following dates:

Friday, February 14,      Friday, March 21.

Missing a test normally results in a mark of zero. Exceptions may be granted in two cases: prior consent of the instructor or a medical emergency. In the latter case, the instructor must be notified within two working days of the missed test, and presented with a doctor’s note immediately upon the student’s return to UBC. When an exception is granted for a missed test, there is no make-up test, and the final exam mark will be used.

**Final exam:** There will be a final examination during the April examination period.

**Final mark:** The final mark will be calculated as follows:

Homework: 10%  
Tests: 20% each  
Final exam: 50%

Updated December 11, 2013.