

MATH 418 Probability, Term 1, 2012–13

Instructor: Dr. M. Barlow, Math Annex 1209.

Course webpage: <http://www.math.ubc.ca/~barlow/m418/index.html>

Office hours: Mon., Wed., Fri. 10:00-10:50 a.m. or by appointment.

Prerequisite: 68% in MATH 321

Text: G.R. Grimmett and D.R. Stirzaker, Probability and Random Processes, 3rd edition, Oxford, (2001). There is a solutions manual to this text that it may also be useful to consult: G.R. Grimmett and D.R. Stirzaker, One Thousand Exercises in Probability, Oxford, (2001).

Outline: The course will be based on the first five chapters of Grimmett and Stirzaker, with additional topics as time permits. Main topics:

- Probability spaces
- Independence and conditional probability
- Discrete and continuous random variables
- Distributions
- Expectation
- Generating functions and characteristic functions
- Convergence of random variables
- Law of large numbers
- Central limit theorem

Evaluation: The final mark will be computed according to the following formula:

Homework: 25%

Mid-term: 25%

Final Exam: 50%.

Homework: Assignments are due at the beginning of class on the due date. No late assignments will be accepted.

Mid-term. This will be on Friday, October 19th. Missing the mid term will normally result 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 as soon as possible (preferably before the 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 Examination. This will be in the December examination period.