

STAT 7060: Advanced Probability Theory, Winter 2017 (A01)

Tentative Course Outline

Instructor: Brad Johnson
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Class-time: MWF 9:30 a.m. – 10:20 a.m. (418 Machray Hall)
Office hours: Open door policy (or by appointment)
Website: umanitoba.ca/d2l

General Description: Selected topics from probability theory, including: probability as measure, events, random variables, independence, integration and expectation, convergence and conditional expectation.

Prerequisite(s): Consent of the instructor.

Textbook: RESNICK, S. I. 2005. *A Probability Path*. Birkhäuser Boston Inc., 5th printing. (Available through SpringerLink) + Lecture Notes from Instructor.

Suggested Resources: The *'s ones are on 2 hour reserve in the Science Library. Note also that there are a number of probability theory books available through the Library's Springer E-book subscription.

*ASH, R. B. 2000. *Probability and measure theory*. Harcourt/Academic Press, second edition. With contributions by Catherine Doléans-Dade.

*BILLINGSLEY, P. 1995. *Probability and measure*. John Wiley & Sons Inc., third edition.

CHUNG, K. L. 2001. *A course in probability theory*. Academic Press Inc., third edition.

DURRETT, R. 2005. *Probability: theory and examples*. Duxbury Press, third edition.

JACOD, J. AND PROTTER, P. 2003. *Probability essentials*. Universitext. Springer-Verlag, second edition.

KLENKE, A. 2008. *Probability theory*. Universitext. Springer-Verlag London Ltd., London. A comprehensive course. (*Available as a Springer E-book through the Library*).

ROSENTHAL, J. S. 2006. *A first look at rigorous probability theory*. World Scientific Publishing Co. Pte. Ltd., second edition.

*WILLIAMS, D. 1991. *Probability with martingales*. Cambridge Mathematical Textbooks. Cambridge University Press.

Grading Scheme:	Mid-term Test	30%	(Date/Time to be announced, Approx. March 18, 2017)
	Assignments	20%	(Approximately 4)
	Final Exam	50%	(Date/Time to be announced)
	Total	100%	

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