

Mathematics 1550H – Introduction to probability

TRENT UNIVERSITY, Winter 2015

Readings and Schedule

The following schedule is *tentative* – no lesson plan survives contact with actual students! – and our actual pace will be adjusted as necessary. The references below are to the textbook, *Introduction to Probability* (2nd Edition), by C.M. Grinstead and J. Laurie Snell, American Mathematical Society, 2003, which available for free under the terms of the GNU Free Documentation License at: www.math.dartmouth.edu/~prob/prob/prob.pdf Please note that the textbook is a little unusual among modern probability textbooks in that it develops discrete and continuous probability in parallel, rather than one after the other. This means that you should brush up on your integral calculus, if you aren't taking it concurrently, sooner rather than later.

Week 1. (*5–9 January, 2015.*) Classes begin on Wednesday, 7 January. [Chapter 1] Discrete probability distributions. *No workshops this week.*

Week 2. (*12–16 January, 2015.*) [Chapters 1 & 2] Discrete probability distributions and continuous probability densities. Quiz #1 written on Thursday, 15 January.

Week 3. (*19–23 January, 2015.*) [Chapter 3] Counting discrete outcomes, permutations and combinations. Quiz #2 written and Assignment #1 due on Thursday, 22 January.

Week 4. (*26–30 January, 2015.*) [Chapter 4] Discrete and continuous conditional probability. Quiz #3 written on Thursday, 29 January.

Week 5. (*2–6 February, 2015.*) [Chapter 5] Important discrete distributions. Quiz #4 written on Thursday, 5 February.

Week 6. (*9–13 February, 2015.*) [Chapter 5] Important continuous densities. Quiz #5 written and Assignment #2 due on Thursday, 12 February.

Winter Reading Week. (*16–20 February, 2015.*) Enjoy!

Week 7. (*23–27 February, 2015.*) [Chapter 6] Expected value and variance. Quiz #6 written on Thursday, 26 February.

Week 8. (*2–6 March, 2015.*) [Chapters 6 & 7] More on expected values and variance, random variables, sums of random variables. Quiz #7 written on Thursday, 5 March. *The last date to withdraw from Winter half-courses without academic penalty is Thursday, 5 March.*

Week 9. (*9–13 March, 2015.*) [Chapters 7 & 8] More on sums of random variables, Laws of Large Numbers. Quiz #8 written and Assignment #3 due on Thursday, 12 March.

Week 10. (*16–20 March, 2015.*) [Chapter 8] Laws of Large Numbers, Chebyshev's Inequality. Quiz #9 written on Thursday, 19 March.

Week 11. (*23–27 March, 2015.*) [Chapter 9] Independent trials of discrete and continuous random variables. Quiz #10 written on Thursday, 26 March.

Week 12. (*30 March – 3 April, 2015.*) No classes on Good Friday, 3 April. [Chapter 9] Central Limit Theorem. Quiz #11 written and Assignment #4 due on Thursday, 2 April.

Week 13. *6–10 March, 2015. Tuesday, 7 April, is the last day of classes.* Clean-up and review.

Winter final examination period. (*10–24 April, 2015.*) Watch for the exam schedule to find out when and where the MATH 1550H final will be written!

Last modified 2014.12.05.