

Introduction to Probability

Basic Information

I. Class 9:10–10am MoWeFr in 1068 East Hall

II. Instructor Prof. Hugh L. Montgomery
 4066 East Hall
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 hlm@umich.edu
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III. Course Description Basic concepts of probability are introduced, and applications to other sciences are noted. Most of the reasoning is rooted either in combinatorics or in calculus. The emphasis is on concepts, calculations, derivations and problem-solving, rather than on formal proofs. Serious use is made of material from Math 116 and Math 215, but no prior knowledge of combinatorics is assumed. Specific topics include methods of discrete and continuous probability, conditional probability, independent events, random variables, jointly distributed random variables, expectations, variances, and limit laws.

IV. Text *A First Course In Probability* by Sheldon Ross, Ninth Edition, Prentice–Hall. The course covers most of Chapters 1–7, and part of Chapter 8.

V. Grading Homework will be frequent. You will form homework groups; each group will submit one set of homework solutions per assignment. Each assignment will be collected one week after it is assigned. There will be two mid-term exams, in class, on Friday, October 9, and on Friday, November 20. The final exam will be on Monday, Dec. 21, 10:30–12:30. Grades are based on homework, quizzes, and exam scores, as follows:

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| Homework | 30 |
| Quizzes | 10 |
| First Exam | 15 |
| Second Exam | 20 |
| Final Exam | <u>25</u> |
| Total: | 100 |

Grading philosophy: You are not competing with each other, as there is no set percentage of A's, etc. Rather, you are competing against an academic standard. If you all do really well, then you will all get A's. If you all do poorly, then you will all get C's (or worse).

VI. Email MCommunity groups are available for our use, at MATH-425-003-WN2015-A@courses.umich.edu and at STATS-425-003-WN2015-A@courses.umich.edu

VII. Office Hours 1–2pm Mo, 12–1 We, 10–11am Fr, or by appointment, in 4066 East Hall