

MATHEMATICS 302/STATISTICS 302 Section 202

INTRODUCTION to PROBABILITY

INSTRUCTOR:

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TEXT:

Richard L. Scheaffer, Introduction to Probability and its Applications, 2nd edition, Duxbury Press, 1995.

I will post all handouts, problem sets, final grades, etc. on the web at <http://www.math.ubc.ca/~feldman/m302/>

TOPICS:

1. Basic notions of probability (Chapters 1 & 2 – 9 hrs)
Definition and rules of probability.
2. Discrete and continuous probability distributions (Chapters 3 & 4 – 12 hrs)
Random variables and their expected values, discrete distributions, continuous distributions. Exclude §3.6, §3.9–3.13 and §4.7–4.13.
3. Bivariate and multivariate probability distribution (Chapter 5 – 7 hrs)
Joint, marginal and conditional distributions, conditional expectations. Exclude §5.6, 5.8.
4. Functions of random variables (Chapter 6 – 3 hrs)
Methods for dealing with functions of random variables. Only §6.2.
5. Limit theorems (Chapter 7 – 5 hrs)
Types of convergence, the Central Limit Theorem. Exclude §7.5.

GRADING:

- There will be two midterms (on Wednesday, February 2 and Monday, March 13) accounting for about 40% of the final mark.
- There will be weekly problem sets accounting for about 5% of the final mark.
- The final exam will account for about 55% of the final mark.
- Grades **will** probably be scaled.