

MTH 451

PROBABILITY

FALL 2010

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Office Hours: T 1-2, W-2-3, Th 9:30-11
Text: Grinstead and Snell, Introduction to Probability, 2nd Revised Edition 1997.
ISBN: 0 8218 0749 8. Available (free) at
www.dartmouth.edu/~chance/teaching_aids/books_articles/probability_book/book.html

Course Introduction

This course is a standard calculus-based introduction to Probability Theory. This has applications in Actuarial Science, gambling (e.g. casino) games, and in a great many real-world situations. The material is very appealing and occasionally surprising. Some topics:

1. Probability Spaces, Conditional Probability, Combinatorics (Counting Methods)
2. Density Functions, Random Variables
3. Expected (Average) Value
4. Special Probability Distributions

Course Goals

We will study parts of Chapters 1-10 of the text. Please read the text carefully. You will learn the basics of Probability Theory and be able to solve challenging problems. You will be able to read books and papers on Probability Theory or its applications.

Class Meetings

These will be primarily lectures, but you should be alert and ready to ask and answer questions. Occasionally you will pair off or work in groups in class.

Grading

Two tests: 20% each
Homework: 30%
Final Exam: 30%

Homework

You will learn a great deal by doing homework problems. Usually they will be assigned on Thursday and due the following Thursday at the beginning of class. Late homeworks (within reason) will be accepted but not graded – you will receive an L (late) and the other homeworks will be averaged to determine your grade. Groups will be formed and only one homework turned in for each group.