

MATH 331 [531]
Probability (4 units)
Course Outline

Catalog Description

Probability in sample spaces, discrete and continuous random variables, distribution theory, Chebyshev's Theorem, Central Limit Theorem, expected values and moments.

Prerequisites: Math 275 or concurrently taking 275

Topics	Number of Weeks
Chapter 1: Axioms of Probability	1.0
Chapter 2: Combinatorial Methods	1.0
Chapter 3: Conditional Probability and Independence	1.5
Chapter 4: Distribution Functions and Discrete Random Variables	1.0
Chapter 5: Special Discrete Distributions	1.5
Chapter 6: Continuous Random Variables	1.0
Chapter 7: Special Continuous Distributions	2.0
Chapter 8: Bivariate Distributions	1.5
Chapter 9: Multivariate Distributions	1.0
Chapter 11: Sums of independent Random Variables and Limit Theorems	1.5
Exams	1.0

Textbook: Fundamentals of Probability with Stochastic Processes, 3rd Edition by Saeed Ghahramani

Additional Requirements for Graduate Students:

Graduate students need to complete an additional project on a selected topic

Adopted: April 2012