Math 3C: General Course Outline

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Catalog Description

3C. Probability for Life Sciences Students. (4) Lecture, three hours; discussion, one hour. Requisite: course 3B with a grade of C- or better. Elementary probability, probability distributions, random variables, and limit theorems. P/NP or letter grading.

Textbook

C. Neuhauser, *Calculus for Biology and Medicine*, 3rd Ed., Prentice Hall.

Reviews & Exams

The following schedule, with textbook sections and topics, is based on 25 lectures. The remaining classroom meetings are for leeway, reviews and two midterm exams. These are scheduled by the individual instructor.

Schedule of Lectures

Lecture	Sections	Topics
1	12.1	Counting
2	12.2.1	Probability: Basic Definitions
3	12.2.2	Equally Likely Outcomes
4	12.3.1	Independence
5	12.3.2	Conditional Probability
6	12.3.3	The Law of Total Probability
7	12.3.4	The Bayes Formula
8	12.4.1	Discrete Distributions
9	12.4.2	Mean and Variance
10	12.4.2	Joint Distributions
11	12.4.3	Binomial Distribution
12	12.4.4	Multinomial Distribution
13	12.4.5	Geometric Distribution
14-15	12.4.6	Poisson Distribution
16	12.5.1	Density Functions
17-18	12.5.2	The Normal Distribution
19	12.5.3	The Uniform Distribution
20-21	12.5.4	The Exponential Distribution
22-23	12.6.1	The Law of Large Numbers
24-25	12.6.2	The Central Limit Theorem

Comments

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Outline update: A. Brose, 4/08

For more information, please contact Student Services, ugrad@math.ucla.edu.