MATH 4410

Probability and Statistics I

Course description: Axiomatic probability; conditional probability; random variables/vectors; distribution functions; expectations; moment-generating functions; special distributions; functions of random variables/vectors; random sampling and sampling distributions; central limit theorem; weak law of large numbers.

Mathematical Prerequisites: MATH 2330 or MATH 2350

Textbook: *An Introduction to Mathematical Statistics and Its Applications*, 4th edition, Larsen and Marx, Prentice Hall.

Topic covered: This course will cover Chapter 1 to Chapter 4, and some selected sections from Chapter 5.

Quizzes: Quizzes will be given to help you get more familiar with the sections covered in previous lectures.

Practice Questions: Certain number of exercises questions will be assigned for you to practice but will not be collected.

Grading:
Quizzes   20%
Test 1   25%
Test 2   25%
Final   30%

Grade scale: A: 90-100 B: 80-89 C: 70-79 D: 60-69 F: <60