# 40011 Introduction to Probability Theory and Applications (3)

**Knowledge**

Permutations and combinations, discrete and continuous distributions, and random variables.

**Comprehension**

Conditional probabilities, Baye's formula, mathematical expectation, law of large numbers, normal approximations, basic limit theorems.

**Application**

The main and most important application is to solve many different problems related to the subject.

**Analysis**

N/A

**Synthesis**

Should develop combinatorial and analytic skills to solve problems in probability.

**Evaluation**

Should complete homeworks, pass midterm tests and a final exam.

**Class Activities**

To solve problems in class and discuss theorems.

**Out of class Activities**

To submit homework assignments.