THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

ISOM 3540 Introduction to Probability

Course Outline

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Course description

This course presents basic probability concepts and techniques. Topics like conditional probability, expectation, random variables, discrete and continuous distributions, joint distribution, dependence measures and limit theorems, etc, will be discussed. Modern applications in business, economic, finance and marketing are also presented.

Tentative schedule

1. Combinatorial analysis
2. Axioms of probability and conditional probability
3. Discrete random variables
4. Continuous random variables
5. Joint distributions
6. Properties of expectation
7. Dependence measures
8. Ideas of Bayesian decision
9. Limit theorems

Grading

Assignments   25%
Midterm exam   25%
Final exam   50%

Reference

1. Sheldon Ross (2014). *A First Course in Probability*, 9th edition, Prentice-Hall.

Remarks

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