

# THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

## ISOM 3540 Introduction to Probability

### Course Outline

Instructor: Dr. Mike So  
Tel: 2358 7726  
Email: immkpso@ust.hk

Office: LSK, Room 4075

Tutor: Yvonne Chan  
Tel: 3469 2634  
Email: imywchan@ust.hk

Office: LSK, Room 4049C

### 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*, 9<sup>th</sup> edition, Prentice-Hall.