

ISOM 5540 Introduction to Probability Course Description and Schedule Fall 2024

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Course Description

This is a course on Probability that serves as an introduction to the subject at a level which is sufficient for most of your follow-up courses within the Business School. In particular probability is the basic language of Statistics. This is a calculus-based course and covers the following material.

Axioms of Probability, Conditional Probability and Independence, Continuous and Discrete Random Variables, Transformation of Random variables, Joint Distributions, Properties of expectations including moment generating function, Central limit theorem and Law of Large numbers, and other miscellaneous topics of interest.

Schedule

Lectures Thursday 15:00-17:50 Rm 1027 LSK September 1 to November 30, 2023

Grading

This course is graded as Pass/Fail

Assessment

Students will be given regular homework assignments and I may choose students to present problems and solutions every week.

Midterm and Final exams will be take-home. Homework assignments will be given on a biweekly basis (every two weeks)

Homework 25%, Participation 25% Midterm -25% Final-25%

Reference books

• Textbooks:

1. A first course in Probability, Sheldon Ross. (Required)

The textbook can be purchased either as a hard copy or as an e-book. If students wish to purchase the textbook from the University bookstore, they can do so <u>here</u>. The information from the bookstore regarding the textbook is as follows

	Lecturer/Instructor	Section	Book Particulars	HKUST Price (HK\$)	Stock Status at Bookstore	Sales History
ISOM5540 Introduction to Probability						
1	Lancelot JAMES	L1	[Print Book] A First Course in Probability Author : Ross Edition : 10th Publisher : Pearson ISBN : 9781292269207	423.00	In stock	
			[eBook] A First Course in Probability (A second email with access code will be sent within 3-4 business days of your purchase)	352.00	In stock	
			Author : Sheldon Ross Edition : 10th ISBN : 9781292269238			

2. *Probability*, Jim Pitman. (optional)

This book is available as an e-book from the HKUST library. Simply search for the book name on the library's website (library.ust.hk) and follow the results to obtain the book.

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