COURSE DETAIL

MATHEMATICAL FINANCE

Country
United Kingdom - England

Host Institution
University College London

Program(s)
Summer at University College London

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Statistics Mathematics

UCEAP Course Number
123

UCEAP Course Suffix
S

UCEAP Official Title
MATHEMATICAL FINANCE

UCEAP Transcript Title
MATH FINANCE

UCEAP Quarter Units
6.00

UCEAP Semester Units

4.00

Course Description

This course provides a fundamental overview of mathematical finance. It begins with an overview of financial contracts, interest rates, and the value of money. Specifically, it discusses what constitutes a fair price for a contract and explains why fair prices are rarely used in everyday transactions. After that, students investigate financial markets in a discrete-time setting, with the help of some revision on basic probability theory. The concept of risk-neutral asset pricing is discussed with reference to pricing stocks and options in the exchange. The last part of the course introduces the fundamental concepts of stochastic calculus and concentrates on continuous time finance with the widely used Black-Scholes model. The goal of this course is to provide students with a broad understanding of the application to finance theory, while setting a solid theoretical foundation to the field.

Language(s) of Instruction
English

Host Institution Course Number
ISSU0128

Host Institution Course Title
MATHEMATICAL FINANCE

Host Institution Course Details
https://www.ucl.ac.uk/prospective-students/summer-school/modules/mathematical-f...

Host Institution Campus

Host Institution Faculty

Host Institution Degree
Host Institution Department Statistical Science
Course Last Reviewed 2024-2025

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