COURSE DETAIL

FINANCIAL MATHEMATICS

Country
Ireland

Host Institution
University College Cork

Program(s)
University College Cork

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Mathematics Economics

UCEAP Course Number
110

UCEAP Course Suffix

UCEAP Official Title
FINANCIAL MATHEMATICS

UCEAP Transcript Title
FINANCIAL MATH

UCEAP Quarter Units
4.00

UCEAP Semester Units
2.70

Course Description

This course introduces students to the theory of options, the time value of money, rate of return of an investment cash-flow sequence, and the arbitrage theorem. Students calculate probabilities and expectations of events and random variables associated to finite probability spaces and to standard variants of Brownian motion using conditioning and independence techniques; carry out calculations based on present-value analysis and arbitrage arguments; calculate the price of European call and put options using the multiperiod model; derive and apply the Black-Scholes formula for option pricing; and estimate volatility of shares from price history data.

Language(s) of Instruction

English

Host Institution Course Number

MA4403

Host Institution Course Title

FINANCIAL MATHEMATICS

Host Institution Course Details

https://www.ucc.ie/admin/registrar/modules/?mod=ma4403

Host Institution Campus

UC CORK

Host Institution Faculty

Host Institution Degree

Host Institution Department

Mathematics

Course Last Reviewed

2018-2019

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