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 Campus
UC CORK

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mathematics

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