

COURSE DETAIL

MATHEMATICAL MODELLING AND SIMULATION

Country

United Kingdom - England

Host Institution

London School of Economics

Program(s)

London School of Economics

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mathematics

UCEAP Course Number

118

UCEAP Course Suffix**UCEAP Official Title**

MATHEMATICAL MODELLING AND SIMULATION

UCEAP Transcript Title

MATH MODEL&SIMULATN

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

The course covers some of the most prominent tools in modelling and simulation. Both deterministic and stochastic models are covered. These include mathematical optimization, the application of sophisticated mathematical methods to make optimal decisions, and simulation, the playing-out of real-life scenarios in a (computer-based) modelling environment. Topics may include formulation of management problems using linear/nonlinear and network models (these could include binary, integer, convex, and stochastic programming models) as well as solving these problems and analyzing the solutions; generating random variables using Monte Carlo simulation; discrete event simulation; variance reduction techniques; Markov Chain Monte Carlo methods. The course teaches students to use modelling and simulation computer packages.

Language(s) of Instruction

English

Host Institution Course Number

MA324

Host Institution Course Title

MATHEMATICAL MODELLING AND SIMULATION

Host Institution Course Details

https://www.lse.ac.uk/resources/calendar/courseGuides/MA/2022_MA324.htm

Host Institution Campus

London School of Economics

Host Institution Faculty

Host Institution Degree

Host Institution Department

Mathematics

Course Last Reviewed

2022-2023

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