

COURSE DETAIL

MATHEMATICAL MODELLING

Country

United Kingdom - England

Host Institution

Exeter College, Oxford University

Program(s)

Summer in Oxford

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mathematics

UCEAP Course Number

128

UCEAP Course Suffix

S

UCEAP Official Title

MATHEMATICAL MODELLING

UCEAP Transcript Title

MATH MODELLING

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course introduces the key principles of mathematical modelling, which then are explored through several real-world examples in disease modelling, environmental planning, and population dynamics. The techniques of calculus are essential, although core concepts such as differential equations are revisited. Students also touch on the mathematical models used in data science, particularly the techniques of principal component analysis and clustering, both essential tools in machine learning models.

Language(s) of Instruction

English

Host Institution Course Number

Host Institution Course Title

MATHEMATICAL MODELLING

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

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