COURSE DETAIL

MATHEMATICAL PROGRAMMING
Country Japan
Host Institution International Christian University
Program(s) International Christian University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mathematics
UCEAP Course Number 110
UCEAP Course Suffix
UCEAP Official Title MATHEMATICAL PROGRAMMING
UCEAP Transcript Title MATH PROGRAMMING
UCEAP Quarter Units 4.00
UCEAP Semester Units 2.70

Course Description

This course delves into matrix algebra, calculus (including differentiation and integration), and introductory optimization techniques, all of which are essential in the social sciences, particularly economics and finance. The primary focus of the course lies in mathematical analysis via programming with Octave. The course employs Octave (the free version of Matlab) to facilitate both analytical calculations and simulations.

The course does not assume that students have prior proficiency in calculus or programming and will start from the basics, progressing to the theoretical application of calculus, notably optimization. This term, we will emphasize studying static optimization using the Lagrange method. Optimization theory serves as the cornerstone of economics and finance.

For anyone interested in economics, finance, and programming, this course will be invaluable.

Language(s) of Instruction
English

Host Institution Course Number
ECO214E

Host Institution Course Title
MATHEMATICAL PROGRAMMING

Host Institution Campus
International Christian University

Host Institution Faculty

Host Institution Degree

Host Institution Department
Economics

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