

# COURSE DETAIL

## QUANTITATIVE METHODS (MATHEMATICS)

**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**

158

**UCEAP Course Suffix****UCEAP Official Title**

QUANTITATIVE METHODS (MATHEMATICS)

**UCEAP Transcript Title**

QUANTITATIVE METHOD

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## **Course Description**

This course develops the basic mathematical tools necessary for further study in economics and related disciplines. The course focuses on techniques of calculus (differentiation, partial differentiation, optimization, and integration), methods of linear algebra (use of matrices), and the solution of difference and differential equations. The ideas are taught systematically, with emphasis on their application to economic problems. Examples are used throughout the course for motivation and illustration. Specific topics are as follows: sets, functions, equations, and graphs; difference equations, sequences, and limits; differentiation, inverse functions, and exponential and logarithmic functions; partial differentiation, chain rule, and homogeneous functions; optimization in two variables (unconstrained and constrained); Lagrange multipliers; vector notation and convexity; matrix notation, systems of linear equations, and inverse matrices; integration; and differential equations.

## **Language(s) of Instruction**

English

## **Host Institution Course Number**

MA107

## **Host Institution Course Title**

QUANTITATIVE METHODS (MATHEMATICS)

## **Host Institution Course Details**

## **Host Institution Campus**

London School of Economics

## **Host Institution Faculty**

## **Host Institution Degree**

## **Host Institution Department**

Mathematics

## **Course Last Reviewed**

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