



Course Syllabus

Course Code	Course Title	ECTS Credits
ECON-390	Mathematics for Economics & Business	6
Prerequisites	Department	Semester
ECON-261, ECON-262, MATH-108	Accounting, Economics and Finance	Fall
Type of Course	Field	Language of Instruction
Required	Economics	English
Level of Course	Lecturer(s)	Year of Study
1 st Cycle	Mr Marios Christou	3 rd , 4 th
Mode of Delivery	Work Placement	Co-requisites
Face to Face	N/A	None

Course Objectives:

The main objectives of the course are to:

- Offer a good understanding of mathematical techniques used in Economics and Business.
- Introduce mathematical concepts as these can be used in economics and business.
- Develop mathematical skills for application in economics and business problems

Learning Outcomes:

After completion of the course students are expected to be able to:

- Demonstrate an understanding on how mathematical techniques are useful to approach economic theory and practice.
- Explain how mathematical techniques are applied in economics and business and used as a decision making tools.
- Perform an economic and business analysis using a mathematical approaches.
- Distinguish basic principles in Mathematics and their application in Economics and Business.
- Apply mathematical methods to problem solving

Course Content:

1. Introduction to the Nature of Mathematical Economics
2. Static or Equilibrium Analysis (Linear Models and Matrix Algebra)
3. Comparative Static Analysis (Differentiation and its Use in Comparative Statics)
4. Optimisation (Exponential Functions, More than One Choice Variable, Constraints)
5. Higher Order Differential Calculus.
6. Simultaneous Differential Equations

Learning Activities and Teaching Methods:

Lectures, tutorials, practical exercises

Assessment Methods:

Midterm exam, final exam, class participation

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Mathematics for Economics and Business	Jacques, Ian	Pearson	2018	9781292191669

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Fundamental Methods of Mathematical Economics	Chiang A. and K. Wainwright	McGraw Hill	2013	9780071238236