



Course Code ECON-390	Course Title Mathematics for Economics and Business	Credits (ECTS) 6
Department Finance and Economics	Semester Fall - Spring	Prerequisites ECON-261; ECON-262; MATH-108
Type of Course Required	Field Economics	Language of Instruction English
Level of Course 1 st Cycle	Year of Study 3 rd – 4 th	Lecturer(s) Dr Sapuric Svetlana Mr Marios Christou
Mode of Delivery Face-to-face	Work Placement N/A	Co-requisites None
Recommended Optional Programme Components: N/A		

Objectives of the Course:

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 Contents:

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, Constrains)

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| 5. Higher Order Differential Calculus.
6. Simultaneous Differential Equations. |
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Learning and Teaching Methods:

Lectures, Tutorials, Practical Exercises
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Assessment Methods:

Homework, Mid-semester, Final Exam.

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
A.Chiang and K. Wainwright	<i>Mathematical Economics 4th edition</i>	Mc Graw Hill	2005	0070109109

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
R, Thomas	<i>Using Mathematics in Economics 2nd edition</i>	Prentice Hall	1999	0201360500