

Module code: MOD005659	Version: 2 Date Amended: 18/Sep/2017		
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1. Module Title			
Mathematics for Economics I			

2a. Module Leader			
Congmin Peng			

2b. School			
School of Economics, Finance and Law			

2c. Faculty			
Faculty of Business and Law			

3a. Level			
4			

3b. Module Type			
Standard (fine graded)			

4a. Credits			
15			

4b. Study Hours			
150			

5. Restrictions			
Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:	BSc (Hons) Business Economics, BSc (Hons) Business Economics (with placement year), BA (Hons) General Business (framework)		

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

This module provides an introduction to the mathematical concepts, which are of key importance in economics. These techniques are needed to study later modules for BSc Business Economics in the Department of Economics and International Business. It aims to enable students to understand and use mathematical notation and techniques and apply these to economics. The main objective of this module is to enable the students to use differential calculus to solve constrained and unconstrained optimisation problems confidently. These problems are at the core of economic modelling.

The module requires no more prior knowledge than GCSE maths and begins with a revision of basic algebra, covering exponents, roots and logarithms and manipulation of algebraic expressions. It progressively introduces linear and non-linear equations, interest rates, differentiations and multivariate optimisations. This module will lead students to take Mathematics for Economics II.

Every topic will be accompanied by exercise questions in seminars, where students will learn how to solve complex problems with the use of the theory learned in the lectures. The module is assessed at the end of the module through an in-class test.

6b. Outline Content

Basic algebra

Linear equations and functions

Non-linear equations

Time value for money (i)

Time value for money (ii)

Calculus and differentiation (i)

Calculus and differentiation (ii)

Optimisation

Partial derivatives and multivariate optimisation (i)

Partial derivatives and multivariate optimisation (ii)

6c. Key Texts/Literature

The reading list to support this module is available at: <http://readinglists.anglia.ac.uk/modules/mod005659>

6d. Specialist Learning Resources

None

7. Learning Outcomes (threshold standards)		
No.	Type	On successful completion of this module the student will be expected to be able to:
1	Knowledge and Understanding	Manipulate algebraic expressions, solve simple systems of linear and non-linear equations, plot and interpret linear and non-linear equations.
2	Knowledge and Understanding	Differentiate equations of one or more variables.
3	Knowledge and Understanding	Calculate present values and compound interest.
4	Intellectual, practical, affective and transferrable skills	Solve constrained and unconstrained optimisation problems, including the use of Lagrange multipliers, and apply the techniques to economic problems such as utility and profit maximisation.

8a. Module Occurrence to which this MDF Refers				
Year	Occurrence	Period	Location	Mode of Delivery
2018/9	ZZF	Template For Face To Face Learning Delivery		Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	Hours	Learning Outcomes	Details of Duration, frequency and other comments
Lectures	12	1-4	Lecture 1 hr x 12 weeks
Other teacher managed learning	24	1-4	Seminar 2 hr x 12 weeks
Student managed learning	114	1-4	Student self-study as directed by lecturer and module guide
TOTAL:	150		

9. Assessment for the above Module Occurrence					
Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
010	Practical	1-4	100 (%)	Fine Grade	30 (%)
1.5 hour in-class test					

In order to pass this module, students are required to achieve an overall mark of 40%.

In addition, students are required to:

(a) achieve the qualifying mark for each element of fine graded assessment of as specified above

(b) pass any pass/fail elements