



## EC273 | Mathematics for Economics

### Course outline

**Lecturer | Dr. Srinivas Raghavendra**

**Lecture hours | Monday 5-6pm (Tyndall theatre)  
Tuesday 3-4pm (AM150 Ó Tnúthail theatre)**

**Office | Room 208, Cairnes Building  
J.E. Cairnes School of Business & Economics  
[s.raghav@nuigalway.ie](mailto:s.raghav@nuigalway.ie)**

### Introduction

The purpose of this course is to provide students the necessary mathematical skills to pursue more advanced courses in economics. The course is devised to enhance the technical skills in the areas of Algebra and Calculus, which are used in almost all the sub-disciplines of economics. The course aims provide both the analytical and computational skills that are required for the analysis of economic problems.

### Topics

1. Review of Elementary Concepts: Sets, Functions and Algebra
2. Linear Equations: Analysis
3. Linear Equations: Applications and Simulation
4. Simultaneous Linear Systems: Analysis and Applications
5. Quadratic Functions: Analysis and Applications
7. Nonlinear Functions: Analysis, Applications and Simulation
8. Univariate Calculus: Analysis and Applications
9. Multivariate Calculus: Analysis
10. Multivariate Calculus: Applications
11. Unconstrained Optimization: Analysis and Applications
12. Constrained Optimization: Analysis
13. Constrained Optimization: Applications

### Text Book

The textbook for the course is **Mathematics for Economics & Business, sixth edition**,

by **Ian Jacques**, Prentice Hall. I have customized the edition for our course and the book available in the campus book shop. I have made the customized edition available online in the following website. To login you need to buy the book, where you will get the username and password for the website.

<http://www.mymathlab.com/global>

The website is accessible from any computer on our campus. The online material has lots of examples and exercises, and students are strongly advised to work through all these exercises.

## **Tutorials**

There will be tutorials for this course and the details will be announced in [www.nuigalway.ie/ecn/tutorials](http://www.nuigalway.ie/ecn/tutorials)

## **Assessment**

### **Continuous Assessment – 30%**

Note that there will be three assignments each worth 10%

All the assessments will be conducted online at [www.mymathlab.com/global](http://www.mymathlab.com/global) , and the topics, deadline will be announced in due course. The deadline for various assessments will be strict to the minute and the system will not allow you to submit your assignment after the deadline.

### **End Semester Examination - 70%**

The will be written examination at the end of the semester and it carries a weight of 70%

## **Office Hours**

Wednesday 10-12pm

Thursday 10-12pm

If you need to contact me outside my office hours, send me an email.