



**Code:** UMEN3P-15-M      **Title:** Econometrics      **Version:** 3

**Level:** M      **UWE credit rating:** 15      **ECTS credit rating:** 7.5

**Module type:** Standard

**Owning Faculty:** FBL      **Field:** Economics

**Valid from:** 1 September 2005      **Discontinued from:**  
(Revised 1 September 2008)

**Pre-requisites:** None

**Co-requisites:** None

**Excluded combinations:** None

**Aim of module:**

The general aims of this module are to provide students with an appreciation of the use of econometrics as a tool for studying economics, to make them familiar with the main tools of econometrics at an advanced level and to introduce students to computer based methods of econometric investigation.

**Learning outcomes:**

By the end of the module a student should:

- have a knowledge and understanding of econometric analysis to an advanced level (Component A & B)
- have a knowledge and understanding of the value and limitations of econometric techniques (Component A & B)
- develop a critical perspective on the use of econometric analysis. (Components A and B)
- be proficient in using an advanced econometric package; (Component A & B)
- be able to independently replicate econometric analyses of economic data. (Component B)

**Syllabus outline:**

- The simple (two-variable) regression model.
- Multiple regression.
- Statistical inference and hypothesis testing (the classical criteria: Wald, Likelihood ratio and Lagrange multiplier tests).
- Violation of the assumptions of the classical regression model.
- Autocorrelation and dynamic models.
- Time series modelling.
- Heteroskedasticity and Multicollinearity.
- Diagnostic checking, model selection and specification.
- Limited dependent variable models.
- Simultaneous equation models.
- Unit roots, VARs and Cointegration.

**Teaching and learning methods:**

Lectures and workshops will complement each other. Workshops will be computer based exercises on Microfit 4.1 and will allow students to work through the topics covered in the lectures.

**Reading Strategy**

All students will be encouraged to make full use of the print and electronic resources available to them

through membership of the University. These include a range of electronic journals and a wide variety of resources available through web sites and information gateways. The University Library's web pages provide access to subject relevant resources and services, and to the library catalogue. Many resources can be accessed remotely. Students will be presented with opportunities within the curriculum to develop their information retrieval and evaluation skills in order to identify such resources effectively.

### **Indicative sources:**

There are many textbooks, which can be used to follow the course. It is worth having a look at them and finding the one that best suits your individual requirements. Those who have done an undergraduate econometric course might consider following the topics in one of the more advanced texts.

**NB Earlier editions of the books below are fine. So don't go and spend lots of money unnecessarily.**

**You should review basic Maths and Stats in the textbooks.**

See: Thomas Ch 1 to 5, Salvatore Ch 1 to 5, Gujarati Ch 1 to 5 and Appendix A and Dougherty Ch 1 to 3. All texts are referenced below.

**For those completely new to econometrics** the following provide relatively straightforward expositions:

Stewart, J. (1991) 'Understanding Econometrics', Philip Allan.

This is a useful starting point with more words per equation than any other econometrics text.

Gujarati, D. N. (2003) 'Essential of Econometrics', McGraw Hill.

Another simple introduction.

Studenmund, A. H. (2006) "Using Econometrics", Pearson.

An innovative approach, suitable for those completely new to econometrics and those with some experience.

R Carter Hill, William E Griffiths, George G Judge (2001) 'Undergraduate Econometrics', Second edition, John Wiley and Sons.

Very good introduction and good discussion.

Salvatore (2001) 'Statistics and Econometrics', Schaum's Outlines, Second Edition, McGraw Hill. Provides lots of worked examples

Kennedy, P. (2008) 'A Guide to Econometrics', WileyBlackwell; 6th Edition edition

Very useful. It lacks notation and technical detail but explains concepts well and is a great accompaniment to a more formal text

**For those with some knowledge of econometrics:**

Gujarati, D. N. (2005) 'Basic Econometrics', McGraw Hill, Fourth edition.

A useful introductory text with a detailed discussion.

Dougherty (2006) 'Introduction to Econometrics', Oxford University Press, Third edition.

Useful introduction.

Maddala, G. S. (2001) 'Introduction to Econometrics', Third Edition, John Wiley.

This is more up to date than most texts only uses matrix algebra in appendices don't go straight to this book if you have not done econometrics before .

### **Software Manuals**

Pesaran, M. H. and Pesaran, B. "MICROFIT 4.0, Windows version", 1997, Oxford University Press, ISBN 0-19-268531-7. This is the manual for the MICROFIT package that you will be using and contains useful examples and exercises. It is denoted as MICROFIT MANUAL (MM) hereafter

If you already have a textbook that is not on this list and you are happy with it then carry on and use it to follow the course. All texts follow roughly the same material.

## **Assessment**

**Weighting between components A and B**

**A: 50%**

**B: 50%**

### **ATTEMPT 1**

#### **First Assessment Opportunity**

##### **Component A**

##### **Description of each element**

1. Unseen exam, 2 hours

##### **Element weighting**

100%

##### **Component B**

##### **Description of each element**

1. Individual coursework assignment using Microfit of up to 2000 words

##### **Element weighting**

100%

#### **Second Assessment Opportunity (further attendance at taught classes is/is not required)**

##### **Component A**

##### **Description of each element**

1. Unseen exam, 2 hours

##### **Element weighting**

100%

##### **Component B**

##### **Description of each element**

1. Individual coursework assignment using Microfit of up to 2000 words

##### **Element weighting**

100%

**SECOND (OR SUBSEQUENT) ATTEMPT: Attendance at taught classes is not required.**