

<b>Module Code</b>	ECS2008
<b>Module Title</b>	Applied Econometrics I
<b>Level</b>	5
<b>Credit</b>	30
<b>Owning Subject</b>	Economics
<b>Level Restrictions</b>	

### **Aims**

The aim of this module is to help students understand the basic principles of econometric analysis and how econometrics can be used to test economic theories. The module provides students with the skills to analyse data, estimate and interpret econometric models. The module will introduce the students to a range of econometric techniques and their application using econometrics computer software including Excel and Gretl. This module provides the essential background for the third year Applied Econometrics module.

### **Learning Outcomes**

#### Knowledge

On completion of this module the successful student should be able to:

1. critically assess the assumptions of the classical linear regression model
2. use specialised econometric software and data sets to examine economic relationships;
3. apply basic econometric techniques to model economic relationships and carry out postestimation diagnostic tests;

#### Skills

This module will call for the successful student to be able to:

4. search, prepare and manipulate economic and statistical data from ONS, OECD, EUKLEMS, FED, Penn World Tables for regression analysis;
5. use accurate and efficient spreadsheet design to help with presenting data, information and empirical results;
6. apply economic theories to explain the outcomes resulting from economic models in a clear and concise fashion.

### **Syllabus**

- Introduction to econometric analysis
- Derivation of the Ordinary Least Squared (OLS) coefficients and standard errors.
- The classical linear regression model assumptions
- Consequences of their violations and remedial measures
- Simple and Multiple Regression Analysis

- Hypotheses testing
- Dummy variables, test of structural change
- Panel data analysis
- Introduction to time series econometrics

## **Learning, Teaching and Assessment Strategy**

Each week students are required to attend:

1. One and a half hour lecture. The lecture will provide a rigorous examination of econometric theory and a critical evaluation of the empirical literature employing econometric methods. The lectures will provide a framework to facilitate students' individual study by using a large selection of examples and case studies, next to formal theoretical issues. During lectures students will also be asked to solve some theoretical exercises to develop their understanding of econometric methods.

2. One hour computer laboratory for application of econometric techniques using data and econometric software. Computer labs will place strong emphasis on the application of econometric techniques and therefore develop computational skills and diagnostic testing. Real datasets will be used for all lab exercises.

Summative short quizzes of 15 minutes duration will be conducted at regular intervals throughout the year during lecture or seminar sessions. This will form part of the learning and teaching as students will get into the habit of revising their learning materials at bitesize whilst clearing up any doubts about the materials that has been covered with the immediate feedback given to them straight after the quizzes.

### Assessment

#### Formative Assessment

Formative assessment and feedback will take place during lectures and computer labs. Students are expected to solve theoretical and practical exercises and to give short presentations during lecture and lab sessions. Lab sessions will give students the opportunity to apply the econometric models and techniques introduced during lectures to real world data and interpret the results. One-to-one consultation with lecturers is available during office feedback hours.

#### Summative assessment

1. Weeks 2-10: Quizzes once every three weeks, each worth 5% to assess outcomes 1 & 2.
2. Weeks 12-24: Quizzes once every three weeks, each worth 5% to assess learning outcomes 4 & 6
3. One in-class test, worth 20%, to take place in week 19, on dummy variables/panel data. This will address learning outcomes 2, 4, 5 & 6.
4. A two-hour unseen examination, worth 50%, to assess students' overall understanding of the subject matter and their applications. The examination will assess the entire syllabus, addressing learning outcomes from 1, 3, 5 & 6.

An overall grade of 40% or better is required to pass the module.

### Assessment Weighting

Quizzes: 30%; An In-class test: 20%; Unseen Examination: 50%

### Exam Duration

Examination, 2 hours

### Learning Materials

Your online reading lists can be accessed from the My Study area of UniHub. They highlight essential and recommended reading for all modules you are registered on.

### MODULE RUNS

<b>Module Leader</b>	<b>Future Academic Year</b>	<b>Term</b>	<b>Campus</b>	<b>Part of Term</b>	<b>Start/End Dates</b>	<b>Max Nr of Students</b>
Michela Vecchi	2017/2018	Autumn	HEN-Hendon Campus	AY-Academic Year	02-OCT-17 / 13-APR-18	199
Michela Vecchi	2018/2019	Autumn	HEN-Hendon Campus	AY-Academic Year	12-OCT-18 / 03-MAY-19	199
Michela Vecchi	2019/2020	Autumn	HEN-Hendon Campus	AY-Academic Year	07-OCT-19 / 11-APR-20	199
Michela Vecchi	2020/2021	Autumn	HEN-Hendon Campus	AY-Academic Year	05-OCT-20 / 09-APR-21	199
Michela Vecchi	2022/2023	Autumn	HEN-Hendon Campus	AY-Academic Year	03-OCT-22 / 10-APR-23	199
Michela Vecchi	2021/2022	Autumn	HEN-Hendon Campus	AY-Academic Year	05-OCT-21 / 09-APR-22	199