

# EC907-30 Quantitative Methods: Econometrics A (for MSc Behavioural and Economic Science - Economics Track)

**22/23**

**Department**

Economics

**Level**

Taught Postgraduate Level

**Module leader**

Manuel Bagues

**Credit value**

30

**Module duration**

11 weeks

**Assessment**

40% coursework, 60% exam

**Study location**

University of Warwick main campus, Coventry

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## Description

### Introductory description

EC907-30 Quantitative Methods: Econometrics A (for MSc Behavioural and Economic Science - Economics Track)

[Module web page](#)

### Module aims

The aim of the module is to equip students with the necessary skills required for research, including both the acquisition of habits of thought and knowledge of the techniques of modern mathematics, statistics and econometrics. The module covers the analysis of cross-section and limited dependent variable data (but does not cover the analysis of time-series data).

## Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

The syllabus for this module will be based on the following topics; however this list is not limited to those listed below and does not infer all of these topics will be studied in the module.

Introductory Mathematics and Statistics: pre-sessional topics covered will include linear algebra, multivariate calculus and constrained optimisation, differential and difference equations, basic probability theory and hypothesis testing.

Econometrics: will cover Randomized control trials, Identification based on observables (e.g. OLS), Instrumental variables Differences-in-differences, Regression discontinuity design.

## Learning outcomes

By the end of the module, students should be able to:

- Subject Knowledge and Understanding:...demonstrate an understanding of material needed for empirical quantitative analysis.
- Subject Specific and Professional Skills:...demonstrate the development of the habit of thought, knowledge and understanding to be able to carry out applied econometric research.
- Subject Knowledge and Understanding:...demonstrate an understanding of fundamental concepts in mathematics and statistics relevant to the other core modules and be able to apply these concepts to economics.
- Subject Knowledge and Understanding:...demonstrate knowledge of the theory and practice of modern econometrics, particularly applied econometrics.
- Cognitive Skills:...demonstrate an understanding of fundamental concepts in mathematics and statistics relevant to the other core modules and be able to apply these concepts to economics.

## Indicative reading list

Please see Talis Aspire link for most up to date list.

[View reading list on Talis Aspire](#)

## Subject specific skills

Students will have the opportunity to develop skills in:

Analytical thinking and communication

Analytical reasoning

Critical thinking

Problem-solving

Abstraction

Policy evaluation

Concepts of Simultaneity and Endogeneity

Analysis of optimisation

## Transferable skills

Students will have the opportunity to develop:

Numeracy and quantitative skills

Data-based skills

IT skills

Written communication skills

Oral communication skills

Mathematical, statistical and data-based research skills

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## Study

### Study time

Type	Required
Lectures	43 sessions of 1 hour (14%)
Seminars	31 sessions of 1 hour (10%)
Private study	226 hours (75%)
Total	300 hours

### Private study description

Private study will be required in order to prepare for seminars/classes, to review lecture notes, to prepare for forthcoming assessments, tests, and exams, and to undertake wider reading around the subject.

## Costs

No further costs have been identified for this module.

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## Assessment

You do not need to pass all assessment components to pass the module.

### Assessment group D3

	Weighting	Study time
Test 1	8%	
Introductory Maths and Statistics test		

	<b>Weighting</b>	<b>Study time</b>
Test 2	12%	
Introductory Maths and Statistics test		
Test 3	20%	
Online Examination	60%	
A paper which examines the course content and ensures learning outcomes are achieved.		
~Platforms - AEP		

- Online examination: No Answerbook required
- Students may use a calculator
- Economics dept. statistical tables (yellow/ red)

## **Feedback on assessment**

The Department of Economics is committed to providing high quality and timely feedback to students on their assessed work, to enable them to review and continuously improve their work. We are dedicated to ensuring feedback is returned to students within 20 University working days of their assessment deadline. Feedback is returned on a standardised assessment feedback cover sheet which gives information both by tick boxes and by free comments. Students are informed how to access their feedback, either by collecting from the Postgraduate Office, from seminar tutors or within their seminar group sessions. Module leaders often provide generic feedback for the cohort in addition to the individual-specific feedback on assessment performance.

[Past exam papers for EC907](#)

## **Availability**

### **Pre-requisites**

Technical prerequisites (besides a first degree in economics) are elementary probability and statistics, mathematics for economists and algebraic facility.

## **Courses**

This module is Core optional for:

- Year 1 of TECS-C8P8 Postgraduate Taught Behavioural and Economics Science (Economics Track)

This module is Core option list A for:

- Year 1 of TECS-C8P8 Postgraduate Taught Behavioural and Economics Science (Economics Track)