

# **BS3336 - APPLIED ECONOMETRICS AND FORECASTING**

**Module Number:** BS3336

**Module Title:** Applied Econometrics and Forecasting

**Number of Aston Credits:** 10

**Total Number of ECTS Credits:** 5  
(European Credit Transfer)

**Staff Member Responsible for the Module:**

**Dr Michail Karoglou**  
Economics & Strategy Group

South Wing, Room 912  
Email: please contact the group administrator  
Lynne Woolley, SW907b, Extension 3038

Availability: please contact the group administrator  
Lynne Wooley, SW1017, Extension 3038

**Other Staff Contributing to the Module:**

None

**Pre-Requisite(s) for the Module:**

BS2220 Introduction to Econometrics

**Module Learning Outcomes:**

This is the primary quantitative module that final year students undertake and advances their knowledge and skills to the methods of econometric and time-series analysis. More specifically, the main purpose of the module is to familiarise students with the methods of modern econometrics and to demonstrate how economic and financial time series can be modelled for inference and forecasting. Topics covered include probability theory, estimation and hypothesis testing, static and dynamic modelling as well as univariate and multivariate time series analysis. In particular, on successful completion of this module, students will be able to:

- analyse economic and financial data and explain the results obtained from the use of econometric packages;
- understand how econometrics can be used to test theories in economics and finance;
- have knowledge of and capacity to use the essential methods of applied time series econometrics;
- practically use the econometric techniques discussed to conduct his/her empirical investigations in economic and finance

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## Module Content:

The module will cover the following five thematic units:

- a. Probability Theory
- b. Data Description and Hypothesis Testing
- c. Regression Analysis
- d. Univariate Time-Series Analysis
- e. Multivariate Time-Series Analysis

## International Dimensions:

This module contents are universally applied in international dimensions through direct examples in both lectures and case study sessions.

## Corporate Connections:

The module aims to teach students important tools of quantitative analysis, which is essential for corporate management. The module includes material relevant to business through examples and cases studies employed in both lectures and tutorial sessions.

## Links to Research:

This module is essential to any quantitative research in the field of economics, business and management.

## Learning and Teaching Rationale and Methods:

(Including composition of learning hours)

The lecture programme introduces students to key concepts, and indicates the appropriate areas for further study. The seminar programme (tutorials and computer classes) provides an opportunity for students to actually implement the methods and techniques introduced during lectures, and to clarify, reinforce, and extend their understanding of the subject. There will be 10 two-hour lectures including revision, and 10 one-hour alternate week seminars (i.e. tutorial and computer classes in alternate weeks).

## Contact and directed learning

a) Method of Learning – Lectures, seminars (tutorials and computer classes), group project.

b) Duration

|                          |                  |
|--------------------------|------------------|
| Private Study/Group Work | 45 hours         |
| Lectures and Seminars    | 30 hours         |
| Revision                 | 23 hours         |
| Assessment               | 2 hours          |
| <b>Total</b>             | <b>100 hours</b> |

## Ethical Approval:

This module does not require any primary research and no ethical approval will be necessary.

## **BS3336 - APPLIED ECONOMETRICS AND FORECASTING**

### **Assessment and Feedback Rationale and Methods:**

Examination: one closed-book two-hour (+10 mins reading time) examination at end of the semester  
(70% of final mark).

Coursework: one project report (30% of final mark).

This assessment package is designed to test students' understanding and application of econometric concepts, models and techniques.

Methods of feedback include physical and electronic interactions between lecturer and students in between lectures, classes and other occasions during the term as well as office hour meetings throughout the course.