EC124-15 Statistical Techniques B

21/22

Department
Economics
Level
Undergraduate Level 1
Module leader
Jeremy Smith
Credit value
15
Module duration
10 weeks
Assessment
40% coursework, 60% exam
Study location
University of Warwick main campus, Coventry

Description

Introductory description

This module provides students with a thorough understanding in basic principles of statistics, You will gain an understanding of probability theory, calculating moments of univariate and multivariate distributions (including some commonly used special distributions), hypothesis testing and confidence intervals. You will gain skills and techniques for analysing data.

Module web page

Module aims

To provide the requisite quantitative background for a thorough and rigorous study of economic analysis, econometric methods and applied economics subjects, commensurate with the single honours Economics course.
To offer a sufficient challenge for students who enter Warwick with a high grade in A-level mathematics and/or statistics. 15 CAT variant is not available to all students.

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 module will typically cover the following topics:
Descriptive statistics; Probability; Discrete random variables; Binomial and Poisson distributions; Bivariate distributions; covariance and correlation; Continuous random variables; uniform and normal distributions; Limit theorems; Sampling and sampling distributions; Hypothesis testing and confidence intervals; Non-parametric testing.

Learning outcomes

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

- By the end of this module you will have acquired the statistical techniques necessary to study core and optional first and second year modules in economics; and developed further your knowledge of statistical methods and statistical modelling; and generated an awareness of data and of data handling

Indicative reading list

The basic practice of statistics by David S. Moore; William Notz; Michael A. Fligner 2018
Statistics for Business and Economics, Global Edition by Paul Newbold; William Carlson; Betty Thorne
Statistics: learning from data by T. A. Short; Roxy Peck 2018

View reading list on Talis Aspire

Subject specific skills

Students will acquire the tools of quantitative methods necessary to study core and optional first and second year modules in economics for joint honours courses in Economics. They will develop further their techniques of statistical methods and statistical modelling; and generate an awareness and analysis of data, of data handling and of report writing.

Transferable skills

Students will develop their analytical and communication skills.

Study

Study time

Type	Required
Lectures	10 sessions of 2 hours (13%)
Seminars	4 sessions of 1 hour (3%)
Demonstrations	4 sessions of 1 hour (3%)
Private study	122 hours (81%)
Total	150 hours

Private study description

The private study time will allow students time to prepare for their seminars, revise for class tests and develop their skills to become independent learners.
Through independent reading and discussion with others, students will be exposed to a variety of viewpoints, learn to choose among them, and you will be better prepared to develop your own distinctive ideas.

Costs

No further costs have been identified for this module.

Assessment

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

Assessment group D1

	Weighting	Study time
Test 1 A 50 minute class test	12%	
Test 2 A 50 minute class test	12%	
1200 word Statistical Project 1200 word statistical project	10%	
6 x problem sets Six problem sets (1% each). One aggregated mark to be given for all six problem sets.	6%	
Online Examination Final examination taken in the summer	60%	

~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 directed comments. Students are informed how to access their feedback, either by collecting from the Undergraduate Office, from seminar tutors or within their seminar group sessions. Module leaders provide generic feedback for the cohort in addition to the individual-specific feedback on assessment performance.

Past exam papers for EC124

Availability

Pre-requisites

A level Mathematics, or equivalent.

Courses

This module is Core optional for:

- Year 1 of UIPA-L1L8 Undergraduate Economic Studies and Global Sustainable Development

This module is Core option list A for:

- Year 1 of UIPA-L1L8 Undergraduate Economic Studies and Global Sustainable Development