Liverpool John Moores University

Title: METHODS OF ECONOMIC INVESTIGATION
Status: Definitive
Code: **5018BUSAE**   (108111)
Version Start Date: 01-08-2011

Owning School/Faculty: Liverpool Business School
Teaching School/Faculty: Liverpool Business School

Team	emplid	Leader
James Eden		Y

Academic Level:	FHEQ5	**Credit Value:**	24.00	**Total Delivered Hours:**	72.00
Total Learning Hours:	240	**Private Study:**	168		

Delivery Options
Course typically offered: Standard Year Long

Component	Contact Hours
Workshop	72.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	Individual worksheet - 2000 word equivalent	30.0	
Report	AS2	Individual worksheet - 2000 word equivalent	30.0	
Dissertation	AS3	Group project	40.0	

Aims

1. To introduce a mathematical approach economic investigation;
2. To introduce students to statistical methods used to test hypotheses in economics;
3. To analyse the construction and testing of economic models, and thereby to complement the other modules studied;
4. To allow the student to develop an economic model and use appropriate statistical tests to assess its empirical validity.

Learning Outcomes

After completing the module the student should be able to:

1   Apply basic mathematical techniques used in economics
2   Use those mathematical techniques to examine economic issues and problems
3   Discuss the use of a range of statistical methods in economics
4   Interpret the results from the application of the statistical methods covered
5   Discuss the main problems in using regression methods in economics
6   Construct an economic model, collect appropriate data and subject it to empirical test

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Essay	1	2	3	4	5	6
Report	1	2	3	4	5	6
Project	1	2	3	4	5	6

Outline Syllabus

Components and structure of economic models. Linear and non-linear functions. Simultaneous equations and comparative statics. Introduction to calculus, maximisation and minimisation, partial differentiation. Constrained maximisation and minimisation.

Probability theory. Sampling theory, estimation and hypothesis testing. Correlation and regression analysis. Use of statistical computer software (Minitab). Applications to problems drawn from micro and macro economics

Learning Activities

The mathematical and statistical streams will be taught in parallel through the year. Classes will combine presentation of content and practical exercises. Participation in a supervised small group project, to develop and test an economic model, will complement the classes.

References

Course Material	Book
Author	Barrow, M.
Publishing Year	2006

Title	Statistics for Economics, Accounting and Business Studies
Subtitle	
Edition	4th
Publisher	Pearson
ISBN	027368308x

Course Material	Book
Author	Daly, F. et al
Publishing Year	1995
Title	Elements of Statistics
Subtitle	
Edition	
Publisher	
ISBN	0201422786

Course Material	Book
Author	Hammond, P.J. & Sydsaeter, K.,
Publishing Year	2008
Title	Essential Mathematics for Economic Analysis
Subtitle	
Edition	3rd
Publisher	Prentice Hall
ISBN	013583600X

Course Material	Book
Author	Jaques, I
Publishing Year	2006
Title	Mathematics for Economics and Business
Subtitle	
Edition	5th
Publisher	Pearson
ISBN	100273701959

Course Material	Book
Author	Thomas, R.L
Publishing Year	1999
Title	Using Mathematics in Economics
Subtitle	
Edition	2nd
Publisher	
ISBN	0201360500

Notes

A range of basic mathematical and statistical techniques widely used in economics is

introduced. The emphasis is on their practical application to economic problems.

The worksheets are practical exercises providing both formative and summative assessment. The project is a final summative assessment bringing together elements from the whole module.