

## Liverpool John Moores University

Title: BUSINESS MATHEMATICS AND STATISTICS  
Status: Definitive  
Code: **4001KFLAF** (117998)  
Version Start Date: 01-08-2011

Owning School/Faculty: Liverpool Business School  
Teaching School/Faculty: Kaplan Financial London

Team	Leader
James Fraser	
Graham Padgett	

**Academic Level:** FHEQ4      **Credit Value:** 24.00      **Total Delivered Hours:** 80.00  
**Total Learning Hours:** 240      **Private Study:** 160

### Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	52.000
Tutorial	26.000

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Test	AS1	Diagnostic test	10.0	0.50
Report	AS2	Coursework: written report utilising quantitative and qualitative data	30.0	
Exam	AS3	Examination	60.0	2.00

### Aims

1. To introduce different data types and the approaches required for analysis.
2. To enable the student to appreciate the role of statistical and mathematical methods in a business environment.
3. To develop an awareness of the scope and limitations of quantitative analysis.
4. To enable the student to formulate and evaluate problems, interpret patterns and

*find trends in the data.*

*5. To facilitate basic forecasting and hypothesis testing for data sets.*

*6. To develop student skills in linear programming techniques.*

*7. To use computer packages for data analysis.*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Identify different data types, manipulate data and carry out simple statistical analysis.
- 2 Present data using appropriate graphs and packages.
- 3 Calculate and use various location and dispersion measures and explore data to enable decision making.
- 4 Formulate, test and interpret hypotheses using suitable significance tests.
- 5 Undertake analysis of time series and bivariate data to facilitate a simple forecast.
- 6 Calculate a range of basic financial measures.
- 7 Resolve linear programming problems.
- 8 Use index numbers in business problems.
- 9 Produce a statistical report.

## **Learning Outcomes of Assessments**

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

TEST	1				
REPORT	2	5	9		
EXAMINATION	3	4	6	7	8

## **Outline Syllabus**

*Introduction to data types, primary and secondary data sources, data presentation.*

*Measures of location and dispersion and their uses.*

*Confidence intervals, simple hypothesis tests to include the Chi-squared test.*

*Regression and correlation.*

*Time series analysis.*

*Probability.*

*Financial mathematics, compounding, discounting and investment appraisal.*

*Linear programming.*

*Index numbers.*

*Use of the Excel computer package.*

## **Learning Activities**

Lectures, tutorials and private study.

## References

<b>Course Material</b>	Book
<b>Author</b>	OAKSHOTT, LA
<b>Publishing Year</b>	2008
<b>Title</b>	ESSENTIAL QUANTITATIVE METHODS FOR BUSINESS MANAGEMENT AND FINANCE
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	PALGRAVE MACMILLAN
<b>ISBN</b>	9780230218185

<b>Course Material</b>	Book
<b>Author</b>	ANDERSON, DR, SWEENEY, DJ AND WILLIAMSON, TA
<b>Publishing Year</b>	2008
<b>Title</b>	STATISTICS FOR BUSINESS & ECONOMICS
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	CENCAGE
<b>ISBN</b>	0324566345

<b>Course Material</b>	Book
<b>Author</b>	CURWIN, J AND SLATER, R
<b>Publishing Year</b>	2008
<b>Title</b>	QUANTITATIVE METHODS FOR BUSINESS DECISIONS
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	CENCAGE
<b>ISBN</b>	1844805743

<b>Course Material</b>	Book
<b>Author</b>	SWIFT, L
<b>Publishing Year</b>	2005
<b>Title</b>	QUANTITATIVE METHODS FOR BUSINESS MANAGEMENT AND FINANCE
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	MACMILLAN
<b>ISBN</b>	97814003935281

## Notes

This module introduces basic mathematical and statistical concepts and relates them to business and accounting situations and provides a foundation for further studies in

business and finance.

The test is a diagnostic assessment; the coursework provides an opportunity for formative assessment, whilst the examination is the terminal summative assessment.

Successful business decisions rely on quantitative methods to narrow possibilities and help predict what options will have the greatest chance of success. Whether you are making purchasing, marketing or financing decisions, it is essential to obtain a quantitative foundation to assist in the decision-making process. Using math and numbers to back up your business decisions helps you make more informed choices and can help increase your company's success. Probability. Fuse/Fuse/Getty Images. Use probability to determine the long-term chance of profitability on products you offer and to help From truck scheduling to sales forecasting, quantitative models allow businesses to reduce costs, better allocate resources and find opportunities for increased revenue. The approach taken to meet such goals depends on the nature of the business problem, the data available ...Â From truck scheduling to sales forecasting, quantitative models allow businesses to reduce costs, better allocate resources and find opportunities for increased revenue. The approach taken to meet such goals depends on the nature of the business problem, the data available and the appropriate analytical model to apply. The models fall into five major categories: statistics, forecasting, data mining, optimization and simulation. Statistics. Doctoral course syllabus. Quantitative Research Methods for Business Study. (01/02/2019). Yeming (Yale) GONG.Â DBA participants study core quantitative. research methods for business study. 3 Research. example.Â Wilson, J. (2010) "Essentials of Business Research: A Guide to Doing Your Research Project" SAGE. Publications. Popper, K. (2005). Quantitative methods for public administration. Course Material. The course material package is composed ofÂ 1.0 INTRODUCTION. An understanding of matrices and their operations is essential for input output analysis in business and economic decisions. It is also essential for solving complicated problems in simultaneous equation systems. In this unit, you will just be introduced to the basic rudimentary of matrices, with some simple applications.