

Module Specification

Module Summary Information

1	Module Title	Essential Analysis for Business
2	Module Credits	20
3	Module Level	4
4	Module Code	QME4013

5	Module Overview
<p>The module will introduce you to a range of methods, both quantitative and qualitative. You will learn how to access primary and secondary data sources and how to analyse data of various types (text, numeric or other). This will include literature reviews, the design of questionnaires and interviews, and content analysis for text-based material. For structured data a spreadsheet package will be used to create graphs, charts and pivot tables. The problems of processing larger data sets will be considered. Some basic probability and statistical techniques including correlation, regression and forecasting will be included. Tools such as Excel Solver will be used for optimization, quantitative decision making and problem solving. Finally, the various techniques will be brought together and their use in writing business reports, and presenting data and information professionally, will be examined.</p> <p>This module supports the business programmes which provide the student with an understanding of how businesses operate, its functions, operating environment (international, online and offline) and requisite skills. The module will do this through the material and examples used, for example in forecasting and examining optimization typical business problems will be used, in many cases using large data sets from real applications. It will specifically support this by designing tasks and challenges that develop key transferable skills essential to a career in business. In addition you will analyse operational situations and devise approaches that may improve the performance of the business organisation. The economics programmes apply the optimisation principles of mainstream economics in a variety of settings, using a range of techniques. The module will support this and provide you with specific tools to apply these optimisation principles, allowing you to analyse economic questions.</p>	

6	Indicative Content
<ul style="list-style-type: none"> • Making a Model – a costing exercise based on a scenario that will use a variety of facilities offered in Excel. • Building a Budget – as budgeting is a task with which all managers will have to be familiar then this skill is a preparation for the rigours of business life. • Making a Chart 1 – Introduction to charting using the most common chart types, Bar, Horizontal Bar, Line and Pie. These will follow the styles set out in the guidelines published by the Office for National Statistics. • Summary Statistics – Mean, Median, Mode, Standard Deviation of both Population and Sample, Normal Distribution and representation of data in charts. This largely uses data from the FTSE, as student will be studying that in other modules. • Making a Chart 2 – Development of chart types, including correlation both by charting and calculation, and use of less familiar charts including double axis combo charts in order to present more complex information. • Regression – finding potential patterns in data and seeing limitations why such patterns are not always valid for use. • Hypothesis Testing – seeing significance in the linkage data sets and examining the confidence in making business decisions based on those data sets. 	

- Business Mathematics – making financial decision aided by Excel – for example modelling mortgages and loans
- Forecasting and Prediction – using both linear and seasonal forecasting. Introducing uncertainty in forecasts and examining other factors that may influence outcomes.
- Using Big Data – acquiring data from web sources processing it into a form that Excel allow to be used for further analysis
- Pivot Tables and Pivot Charts – getting Excel to do work for you.
- Big Data and the Bigger Picture – use of big data to examine the consequences of, for example, Climate Change and extreme weather events and flooding, and compare any findings with specific food prices.

7	Module Learning Outcomes		
	On successful completion of the module, students will be able to:		
	1	Create Information from data, and present that information, resultant charts and explanatory text in a logical and robust way.	
	2	Perform appropriate statistical and mathematical calculations relevant to business, correctly interpreting the results and highlight their use in business decisions.	
	3	Demonstrate proficiency in the use of commercial software packages both to process data and investigate and provide insight into business problems.	

8	Module Assessment		
Learning Outcome			
	Coursework	Exam	In-Person
1, 2, 3	X*		

* Individualised Excel Task 100%

9	Breakdown Learning and Teaching Activities	
Learning Activities		Hours
Scheduled Learning (SL) includes lectures, practical classes and workshops, peer group learning, Graduate+, as specified in timetable		36
Directed Learning (DL) includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning, as directed on VLE		13
Private Study (PS) includes preparation for exams		151
Total Study Hours:		200