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MODULE DESCRIPTOR

Module Title

Quantitative Business Techniques

Reference	BS2114	Version	5
Created	February 2017	SCQF Level	SCQF 8
Approved	June 2013	SCQF Points	15
Amended	August 2017	ECTS Points	7.5

Aims of Module

To provide students with an understanding of, and the ability to apply, a range of statistical and management science techniques.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Apply and demonstrate an understanding of sampling methods and basic statistical techniques in business contexts.
- 2 Apply appropriate data modelling and forecasting techniques in business contexts.
- 3 Interpret results generated by data modelling and forecasting techniques, including those provided by specialised statistical computer software.
- 4 Apply, and demonstrate an understanding of, relevant management science techniques.

Indicative Module Content

Classification of variables. Random and non-random sampling. Graphical presentation of data. Descriptive statistics (including: mean, median and standard deviation). Rules of probability. Expected value of a probability distribution. Normal distribution. Confidence intervals. Simple linear regression and correlation. Multiple regression. Time series: moving averages, exponential smoothing, and models with seasonal and trend components. Index numbers. Linear Programming: formulation and graphical solution. Decision Theory: payoff table, decision making criteria (including EMV), Bayesian analysis of additional information, and decision trees. Use of statistical software.

Module Delivery

The module is delivered via a combination of lectures, tutorials and computer laboratories.

Indicative Student Workload	Full Time	Part Time
Contact Hours	36	36
Non-Contact Hours	114	114
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	150
Actual Placement hours for professional, statutory or regulatory body		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Examination	Weighting:	100%	Outcomes Assessed:	1, 2, 3, 4
Description:	Closed book examination				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The module is assessed by one component: C1 - Examination - 100% weighting. Module Pass Mark = Grade D (40%)

Module Grade	Minimum Requirements to achieve Module Grade:
A	70% or above
B	60% - 69%
C	50% - 59%
D	40% - 49%
E	35% - 39%
F	0% - 34%
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	None in addition to SCQF 8 entry requirements or equivalent.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- 1 ANDERSON, D., SWEENEY, D., WILLIAMS, T., FREEMAN, J. and SHOESMITH, E., 2024. *Statistics for business and economics*. 6th ed. Andover: Cengage Learning.
- 2 OAKSHOTT, L., 2020. *Essential Quantitative Methods for Business Management and Finance*. 7th ed. Basingstoke: Palgrave.
- 3 BOWERMAN, B., DROUGAS, A. M., DUCKWORTH, W. M., et al., 2019. *Business Statistics and Analytics in Practice*. 9th ed. McGraw Hill.
- 4 LESIK, S., 2018. *Applied Statistical Inference with MINITAB?*. 2nd ed. New York: Chapman and Hall/CRC.