Module Code:	BUS7B19

Module Title:	Business Analytics for Project Management

Level:	7	Credit Value:	15

Cost Centre(s):	GABP	JACS3 code: HECoS code:	N213 100812

Faculty	Faculty of Social & Life Sciences North Wales Business School	Module Leader:	Dr Ben Binsardi

Scheduled learning and teaching hours	15 hrs
Guided independent study	135 hrs
Placement	0 hrs
Module duration (total hours)	150 hrs

Programme(s) in which to be offered (not including exit awards)	Core	Option
MBA Project Management	✓	☐

Pre-requisites
None

Module Aims
This module aims to develop students' understanding of various numerical methods for forecasting, in particular time-series methods that have wide applications in project management. It also explores the aspects of risk and uncertainty in project management, which are central to forecasting and prediction. This module employs the SPSS software package for implementing forecasting methods (free software downloads available to students).

Intended Learning Outcomes
Key skills for employability

KS1	Written, oral and media communication skills
KS2	Leadership, team working and networking skills
KS3	Opportunity, creativity and problem solving skills
KS4	Information technology skills and digital literacy
KS5	Information management skills
KS6	Research skills
KS7	Intercultural and sustainability skills
KS8	Career management skills
KS9	Learning to learn (managing personal and professional development, self-management)
KS10	Numeracy

	At the end of this module, students will be able to	Key Skills	
1	Provide a critical insight into various numerical methods for forecasting that have wide applications in project management.	KS1	KS6
		KS2	KS8
		KS3	KS9
2	Explores the aspects of risk and uncertainty in project management, which are central to forecasting and prediction In project management.	KS1	KS6
		KS2	KS7, KS8
		KS3	KS9, KS10
3	Identify appropriate techniques to implement forecasting methods employing the SPSS software package.	KS1	KS5
		KS3	KS6, KS8
		KS4	KS9, KS10
4	Critically evaluate several measures of prediction accuracy of a forecasting method in project management.	KS1	KS5, KS6
		KS3	KS7, KS8
		KS4	KS9, KS10

Transferable skills and other attributes

Written skills, problem solving skills, information technology skills and digital literacy, research skills, learning to learn (managing personal and professional development, self-management) and numeracy skills

Derogations
None

	Assessment:			
	Indicative Assessment Tasks:			
	Assignment 1 (Report) (35%) (circa 1,000 words)			
	MOVING AVERAGE, EXPONENTIAL SMOOTHING AND TREND FORECASTING			
	Assignment 2 (Report) (35%) (circa 1,000 words)			
	AN ECONOMETRIC FORECASTING MODEL			
	Assignment 3 (Essay) (30%) (circa 1,000 words)			
	FORECASTING RISKS: A PROBABILITY–IMPACT MATRIX			

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)	Duration or word count (or equivalent if appropriate)
1	1	*Report*	35%	1,000 words
2	3 and 4	*Report*	35%	1,000 words
3	2	*Essay*	30%	1,000 words

Learning and Teaching Strategies:

The learning and teaching strategy will consist of formal lectures to present theory, principles and practices which will form the foundation of the learning outcomes. Students will be encouraged to interact and contribute as a means of developing critical skills. Tutorials will be activity based using real world case studies and live examples to apply the theory into practice and develop their decision making and evaluating skills. In addition, students will be encouraged to undertake self-directed study and further research on selected topics to acquire additional perspectives which will provide them with a deeper understanding of the topics covered.

Syllabus outline:

Forecasting using the SPSS software package
Basic forecasting methods
Time-trend forecasting methods 1
Time-trend forecasting methods 2
Econometric forecasting methods 1
Econometric forecasting methods 2
Measuring forecasting performance

Indicative Bibliography:

Essential reading

Gujarati, D. (2016). *Econometrics by Example*, New York, USA, Publisher: Palgrave.

Recommended (optional) reading

Makridakis, S. G., Wheelwright, S. C. and Hyndman, R. J. (1988). *Forecasting: Methods and Applications*, Hoboken, USA, Publisher: John Wiley & Sons.

Forecasting and Econometrics: Theory and Practice's websites

https://www.macmillanihe.com/companion/Gujarati-Econometrics-By-Example/
https://onlinelibrary.wiley.com/doi/book/10.1002/9780470996430