MODULE SPECIFICATION

Module Code:	**ONL719**

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

Office use only
Initial approval: 12/07/2019 Version no: 1
With effect from: 23/09/2019
Date and details of revision: Version no:

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:

1) Online (pre-recorded) video lectures will critically outline general concepts, theories and principles. Students will be given a hyperlink to the video, so that they can watch the video at their own learning pace.

2) Online (pre-recorded) video seminars and activity-based sessions will use real-life examples to bridge relevant theories with practice. These online seminars are a useful platform to focus on a particular topic.

3) Either online quizzes or online discussion will be used to encourage and stimulate students' online collaboration and learning progression.

4) The spirit of online learning is that students will be encouraged to undertake self-directed study, online collaboration and further research on selected topics, to acquire additional perspectives that will provide them with a deeper understanding of the topics covered.

Syllabus outline:

The module will be delivered over seven weeks as follows

	Acquisition	Practice and collaboration
	Learning through acquisition is what learners are doing when they are listening to a lecture or podcast, reading from books or websites, and watching demos or videos	**Learning through practice** enables the learner to adapt their actions to the task goal, and use the feedback to improve their next action. Feedback may come from self-reflection, from peers, from the teacher, or from the activity itself, if it shows them how to improve the result of their action in relation to the goal.
	Refer the textbook: Gujarati, D. (2014). Econometrics by Example, New York, USA, Publisher: Palgrave.	**Learning through collaboration** embraces mainly discussion, practice, and production. Building on investigations and acquisition it is about taking part in the process of knowledge building itself.
1	**Forecasting using the SPSS software package**	• **Practice Quiz 1** • **Online discussions 1**

2	**Basic forecasting methods**	• **Practice Quiz 2** • **Online discussions 2**
3	**Time-trend forecasting methods 1**	• **Practice Quiz 3** • **Online discussions 3**
4	**Time-trend forecasting methods 2**	• **Practice Quiz 4** • **Online discussions 4**
5	**Econometric forecasting methods 1**	• **Practice Quiz 5** • **Online discussions 5**
6	**Econometric forecasting methods 2**	• **Practice Quiz 6** • **Online discussions 6**
7	**Measuring forecasting performance**	• **Practice Quiz 7** • **Online discussions 7**

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