

Module Details	
Module Title	Quantitative Methods and Data Analytics
Module Code	BIC4003-A
Academic Year	2022/3
Credits	10
School	UoB International College
FHEQ Level	FHEQ Level 4

Contact Hours	
Type	Hours
Directed Study	50
Lectures	50

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 1
BDA	University of Bradford / Semester 2

Module Aims
<p>This module introduces the ideas of statistics, financial mathematics and the importance of data within a business and organisational context. It aims to provide students with the required quantitative techniques to be able to summarise and present data in a meaningful way and to enhance their understanding of how data is collected, managed and used to support decision-making in business activities.</p> <p>Appropriate computer software will be used to help students on this module. Students are enabled through their study of this module to apply financial mathematical techniques to solve simple but realistic problems.</p>

Outline Syllabus

Data and its value: understanding and reporting on activity

Data sources for businesses: internal and external

Cleaning and communicating data

Simple descriptive statistics to include graphical presentation of data and measures of average and dispersion

Probability and probability distributions

Simple regression modelling

Simple time series analysis

Hypothesis testing

Computer packages, for example, Minitab, Excel

Data-informed/data-driven decision making and decision making procedures

Legal and ethical issues in data collection, management and use

Big Data analytics: machine learning, intelligent automation, artificial intelligence (AI) applications

Learning Outcomes

Outcome Number	Description
01	Apply basic quantitative methods in the analysis of problems arising in a business management context.
02	Use computer packages to support completion of the tasks set.
03	Describe and analyse how a company uses data to inform its decision-making.
04	Outline the legal and ethical issues involved in the collection, handling and use of data in the context of business activity.

Learning, Teaching and Assessment Strategy

Students are taught this course in a group of up to 18. Delivery is divided equally between seminars and workshops with considerable emphasis on interactivity between teacher and students and between individual students within the group. This is facilitated by the range of activities introduced into classes, the use of group and pair work and of the further opportunities for interactivity provided.

Students are encouraged throughout to reflect on their own performance and skills development.

Whereas the focus of the teaching is initially on the theoretical aspects of the topics and illustration through worked examples, students are encouraged from early in the course to work independently or in groups on problems drawn from real life business contexts with the tutor taking more of a facilitating approach, supporting the students as they deploy the learned techniques to the problems they have been given.

Student progress is closely monitored by both subject staff and each student's personal tutor. Tutors hold one to one sessions with students during which they are encouraged to reflect on their own progress in meeting their objectives which is particularly valuable in the context of this particular course. Out of this monitoring comes the provision, as necessary, of learner support in specific, identified weaker areas or where students are making limited, unsatisfactory progress.

In terms of assessments, the interim test and report are spread through the term and supplemented by a range of shorter-term preparatory exercises. These do not contribute to the final course assessment but are marked and used to provide detailed feedback to assist the students to prepare for the test and coursework task which contribute to the summative assessment.

During the course students are encouraged to reflect on their own progress in their studies and the level of formative assessment with which they are provided is intended to support them in this. It also gives the information required by tutors to provide the students with additional support in areas of weakness and to signpost them towards more challenging tasks in stronger areas.

Mode of Assessment

Type	Method	Description	Weighting
Summative	Coursework - Written	Portfolio of tasks (1 Hr)	40%
Summative	Coursework - Written	Case study report on how a company uses, or could use, data to enhance its practice (1500 words)	60%

Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.