UNIVERSITY of BRADFORD

Module Descriptor

Module Details	
Module Title	Quantitative Methods in Finance (Distance Learning)
Module Code	AFE7519-B
Academic Year	2022/3
Credits	20
School	School of Management
FHEQ Level	FHEQ Level 7

Contact Hours	
Type	Hours
Directed Study	164
Online Lecture (Synchronous)	10
Online Lecture (Asynchronous)	14
Online Tutorials (Synchronous)	12

Availability	
Occurrence	Location / Period
DLA	University of Bradford / Semester 1

Module Aims

This module provides you with the conceptual understanding and core technical skills in the fields of mathematics, econometrics and statistics that enable you to pursue advanced specialist study in finance. The module provides you with the applied skills, including statistical computing skills, which would be useful for future roles as finance professionals. It also introduces fundamental concepts in finance and investment.

Outline Syllabus

? Valuing bonds and shares; valuation of companies and market efficiency
? Fundamentals of capital budgeting; Risk and cost of capital
? Interest rates and asset returns; Applications to asset returns;
? Presentation of data and descriptive statistics; Probability distributions: Applications to asset returns; Non-normality and non-stationarity in asset returns;
? Statistical inference: Confidence intervals and hypothesis testing;
? Regression analysis; Deviations from the Classical Linear Regression Model;
? Time-series analysis; Unit Roots and Stationarity in Time Series;
? Calculus applied to finance;
? Capital Market Imperfections and Investment Corporate Governance

Learning Outcomes	
Outcome Number	Description
1.1	Present and interpret statistical summaries of financial and other data series and understand the statistical assumptions that lie behind theoretical financial and econometric models.
1.2	Demonstrate a comprehensive understanding of the concepts and frameworks in finance and investment; apply appropriate financial models and techniques to assist financial decision making.
1.3	Solve complex applied problems in financial mathematics, with a practical decision making context.
2.1	Carry out statistical analysis of a financial dataset and identify whether or not it is normally distributed and/or stationary.
2.2	Run and interpret ordinary least squares based regression analysis.
2.3	Critically appraise, analyse and make use of a variety of financial and econometric data in order to aid decision making in business and financial organisations.
2.4	Be able to understand and apply the mathematics behind basic finance theory.
3.1	Demonstrate further development of numerical, analytical and teamwork skills.
3.2	Plan and time manage own applied and theoretical learning.
3.3	Effectively define problems, engage in and evaluate decision making, and use appropriate verbal and written communication skills.

Learning, Teaching and Assessment Strategy

Lectures, seminars and statistical computing sessions provide you with basic theory, knowledge of statistical computing techniques, and live demonstrations which are essential for gaining key discipline skills. These methods allow you to relate classroom-based financial analysis to the `real life` decision making context faced by professionals in business and finance. Weekly tutorials and seminar sessions provide you with the opportunity to apply your theoretical and conceptual knowledge to an applied context and enable you to test your understanding of formal concepts. Tutorials will be used to reinforce the taught component and formative assessments will allow for monitoring progress. These will be supplemented by web-based learning and self-directed learning to support each topic will take place within the directed study time. Formative feedback is provided in the tutorials and lectures. Tutorials also aid reflection, as well as critical evaluation of technical and econometric methods employed by practitioners in finance. Directed study (including completion of practice exercises using statistical software), personal reading and group coursework enhance personal transferable skills.

All sessions are delivered online using digital legal resources and appropriate learning technologies. The Virtual Learning Environment (VLE) for each module is the hub of knowledge through which all module materials are accessed and where a big part of student work takes place.

The module will be delivered over 12 weeks, 5 of which will include synchronous lectures and 7 asynchronous ones. The five synchronous lectures, which involves student interaction with module lecturers and tutors, include a mix of learning activities such as four 2-hour ?live? lectures focusing on delivering content, case studies, tasks, group-based discussions, guest lecturing, and discussing answers to student tasks. One additional 2-hour synchronous lecture will focus on the design of and preparation for the assessment, module revision, and the collection and review of student feedback which will be used to improve module delivery.

The seven asynchronous lectures include 2-hour per week pre-recorded presentations or talks on a particular topic, links to relevant videos and online resources and lists of questions and tasks for self-study. Students can watch the presentations, videos and work on the answers and tasks at their own time.
In addition, each week contains 1-hour ?live? tutorials focusing on solving and discussing case studies, problems etc.
All synchronous lectures and tutorials will be preferably offered during weekends at a proper time to consider the differences in time zones. Further, all lectures and tutorials will be recorded and uploaded on Canvas for further access and review.

Students will be set tasks to monitor their progress, in addition to formal assessment. All teaching will be supported by the information supplied on the virtual learning environment, Canvas. Directed study will be provided to enable students to work towards the final summative assessments.

Assessment includes group coursework and open book examination. The group coursework assists students in realising the following learning outcomes (see above): 1.1, 1.2, 2.2, 2.3, 2.4 and 3.1-3.3. Considering it is one of the first offered modules, extra help, monitor and support by lecture will be provided to each group to boost their team working skills. The open book exam will assess all LOs of module.

Mode of Assessment

Type	Method	Description	Weighting
Summative	Short-Time Limited Online Examination	Open Book Examination (24 Hours)	70%
Summative	Coursework - Written	Group Assignment/Presentation (1000 words)	30%

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.

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