

Module code	FIN507	Level	5
Module title	Empirical Finance and Analytics	Credit value	20
Common/Core/ Elective	Core	ECTS Credits	10
		Notional learning hours	200
Courses on which the module is taught	BA (Hons) Business and Finance	Teaching Period	Autumn

1. Module description

In this module, you'll use mathematical and numerical tools to understand real life business data. Applied quantitative approaches will enable you to analyse and solve complex financial and investment management problems, assess risk positions and estimate forecasted returns.

You'll begin by discussing different types of measurements that are helpful in dealing with business and financial data in spreadsheets. You'll then learn how to summarise data and examine various data distributions – applying statistical models that are fundamental in explaining multi-variable relationships.

You'll be exposed to practical financial applications of descriptive and inferential statistics such as frequencies, measures of central tendency, graphs and charts, statistical tests, correlation and regression – enabling you to use and apply relevant methods to empirically test research hypotheses through various regression methods of analysis, including how to draw practical conclusion from statistical and econometrics results to make decision in the field of financial investments.

2. Learning outcomes

Upon successful completion of this module, you will be able to:

Decision making (MLO 04)

Analyse and contrast evidence from data derived from statistical measures to inform decision making in financial investments.

Digital Data and Tools (MLO 06)

Use spreadsheet applications to compute different statistics and analyse how to use them in a financial context.

Discipline Skills (MLO 08)

Employ basic statistics and financial econometrics methods in the arena of financial and investment analytics.

3. Learning and Teaching Methods

Learning and teaching strategies for this module will be achieved through interactive workshops in computer labs coupled with self-guided learning. The key areas of this module include basic statistical theories, regressions, forecasting and obtaining financial and business data from Refinitiv Eikon (or another financial data provider).

Using relevant IT software and practical examples, you will learn about empirical scientific approaches to analysing and making decision using financial and business data. Workshops will introduce you to key concepts and methodologies, with the help of videos or in-class presentations. You will also have the opportunity to discuss about

how one chooses and implements methods. Using a Lab computer based approach you will learn to implement the theories using Excel (or another spreadsheet application) with guided and self-guided practice. Additional problems are provided for self-directed learning and assessment. All materials and datasets are available on the Virtual Environment.

Learning hours	
Directed learning	48 hours
Workshops/classes	48 hours
Guided/Self-guided learning	152 hours
Total	200 hours

4. Assessment, formative feedback and relative weightings

Assessment 1

Project (group assessment)

Weight (%): 50%

Word Count or Equivalent: 2500

In small groups, you will collect (using a financial database) and analyse statistically a set of financial data (using a spreadsheet). You will then research an area linked to this data and submit a written project intended for a professional audience explaining your analysis and results.

Assessment 2

Report

Weight (%): 50%

Word Count or Equivalent: 2000

The purpose of this task-based assignment is to use the main quantitative forecasting methods applied to different types of financial data. The correct interpretation of the results will demonstrate the students' increasing competency in forecasting analysis. You will submit a written report intended for a professional audience that summarizes the project results.

Each summative assessment will be preceded by an opportunity of formative assessment accompanied by formative feedback.

Mapping of assessment tasks for the module			
Assessment tasks	MLO4	MLO6	MLO8
Project	x	x	x
Report	x	x	x

5. Indicative resources

Anderson, D. (2020) Statistics for Business and Economic, 5th edition, Cengage Cengage Learning, ISBN -13 : 978-1473768451

Cortinhas, C., Black, K. (2013) Statistics for business and economics. 1st European ed, Chichester: John Wiley & Sons, ISBN: 978-1-118-79322-0

Hanke, J. E., Wichern, D. W. (2013). Business Forecasting, Pearson New International Edition, United Kingdom: Pearson/Prentice Hall. ISBN-13: 9781292036182