

FP095-30 Foundation Mathematics and Statistics for Finance and Economics

26/27

Department

Warwick Global Academy

Level

Foundation

Module leader

Paul Goodhead

Credit value

30

Module duration

25 weeks

Assessment

50% coursework, 50% exam

Study location

University of Warwick main campus, Coventry

Description

Introductory description

This module develops the mathematical and statistical skills necessary for analysing practical problems in finance and economics. Students will build confidence in applying mathematical processes to real-world contexts, with particular attention to quantitative analysis in business and financial settings. The module provides a foundation for further mathematical study and equips students with problem-solving skills directly applicable to finance and economics. By the end of the module, students will be able to apply mathematical and statistical techniques to analyse problems, interpret results, and communicate solutions clearly.

[Module web page](#)

Module aims

This module focuses on developing your mathematical and statistical skills to analyse practical problems which where appropriate will be set in a financial context. You will develop your understanding of mathematical processes so that you become confident in their use and application. By the end of the module, you will be able to use mathematical and statistical principles in the analysis and solution of real-world problems set in a financial context.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

Mathematics: Number systems, Solution of linear and quadratic equations and inequalities, coordinate geometry, functions, graphs of linear and quadratic functions, properties and graphs of exponential and logarithmic functions, vectors, matrices, calculus (including differentiation & integration), numerical methods and sequences and series

Statistics and Probability: Descriptive Statistics, Representing data, Correlation & Regression Probability, Discrete random Variable, Discrete Distributions, The Normal Distribution, Confidence Intervals, Hypothesis Testing, Chi-Squared goodness of fit Testing

Learning outcomes

By the end of the module, students should be able to:

- Apply mathematical and statistical knowledge to solve a variety of mathematical and real-world problems often set in a financial contexts, selecting appropriate algebraic tools and statistical models where necessary, implementing them precisely and rigorously to arrive at correct numerical or algebraic results and utilising technology effectively to simplify calculations.
- Undertake basic analysis of data by calculating summary statistics and representing data graphically, understanding the suitability and limitations of different statistical measures and graph types, interpreting the meaning of calculated results within a given context and using them to inform decision-making.
- Use fundamental principles of probability to quantify uncertainty and solve problems involving a selection of discrete and continuous probability distributions.
- Present written mathematical and statistical work clearly and logically.

Indicative reading list

[Reading lists can be found in Talis](#)

Interdisciplinary

Students will have opportunities to draw on knowledge and skills acquired within the different modules on their pathway.

International

All students are international, representing a wide range of cultural, linguistic, and educational backgrounds. They bring diverse experiences and perspectives, enriching discussion and supporting the development of intercultural awareness. Examples for analysis and evaluation are drawn from a variety of countries, ensuring that teaching and learning are embedded in an

international context.

Subject specific skills

construct and present mathematical and logical arguments; develop numeracy skills; understand, interpret and extract information from data presented in various forms; convert real-world problems into mathematical problems; solve mathematical and statistical problems using appropriate techniques including using suitable technology when appropriate; clearly present solutions to mathematical and statistical using appropriate symbols and terms.

Transferable skills

problem solving skills; analytical and logical thought processes; appropriate use of suitable technology

Study

Study time

Type	Required
Lectures	5 sessions of 1 hour (2%)
Seminars	25 sessions of 4 hours (33%)
Online learning (independent)	9 sessions of 1 hour (3%)
Private study	126 hours (42%)
Assessment	60 hours (20%)
Total	300 hours

Private study description

Extra-class reading of books and articles in preparation for lectures and seminars. Home assignments and worksheets. Flipped learning including pre-recorded videos.

Costs

No further costs have been identified for this module.

Assessment

You must pass all assessment components to pass the module.

Assessment group C

	Weighting	Study time	Eligible for self-certification
Assessment component			
Class Test	30%	18 hours	No
Term 1 Theory test			

Reassessment component is the same

Assessment component

Statistical Report	20%	12 hours	Yes (extension)
A Statistical Report analysing (using appropriate software e.g. SPSS) and drawing conclusions using a large dataset set in a real world context.			

Reassessment component is the same

Assessment component

Final Examination	50%	30 hours	No
A final examination testing syllabus content from terms 2 and 3			

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- Students may use a calculator
 - Answerbook Gold (24 page)

Reassessment component is the same

Feedback on assessment

Written feedback via tabula

[Past exam papers for FP095](#)

Availability

There is currently no information about the courses for which this module is core or optional.