

FP093-30 Further Foundation Mathematics and Statistics for Economics

26/27

Department

Warwick Global Academy

Level

Foundation

Module leader

Pragnesh Gajjar

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 extends mathematical knowledge to more advanced concepts and techniques, focusing on their application to finance and economics. Students will build skills in constructing, applying, and critically reviewing advanced mathematical models, gaining the confidence to approach complex quantitative problems. The module is designed to prepare students for undergraduate courses requiring strong mathematical ability, particularly in economics and finance. By the end of the module, students will be able to apply advanced mathematical methods, evaluate the outcomes of models, and solve sophisticated problems in finance and economics contexts.

[Module web page](#)

Module aims

This module focuses on developing your skills in building, applying and reviewing advanced mathematical models and techniques to analyse practical problems. You will develop your

understanding of advanced mathematical concepts and processes so that you become confident in their use and application. By the end of the module you will be able to use advanced mathematics principles in the analysis and solution of real world problems taken from finance and economics contexts.

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.

Topics include elements of: Trigonometry, Functions, Coordinate geometry, Complex Numbers, Advanced calculus, Numerical methods, Linear Algebra, Matrices and Determinants, Partial Differentiation, First and second Order Differential equations, Difference Equations, and Statistical distributions.

Learning outcomes

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

- Analyse problems and use mathematical and statistical knowledge to plan strategies for solving them.
- Select and apply a range of mathematical tools and techniques that are appropriate to solve a given problem.
- Create and use appropriate mathematical models to solve and understand practical real-life problems, in appropriate contexts.
- Construct and present arguments through appropriate use of logical deduction and precise statements involving correct use of symbols and appropriate mathematical language.
- Evaluate the outcomes and predictions of a mathematical model by considering any assumptions made, and its validity and limitations.

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

Students will have opportunities to:
construct and present mathematical and logical arguments,
convert real-world problems taken from financial and economical contexts into mathematical problems,
solve mathematical problems using appropriate advanced techniques including using suitable technology when appropriate,
clearly present solutions to mathematical and statistical problems using appropriate symbols and terms.

Transferable skills

Transferable skills will include: problem solving skills, analytical and logical thought processes and appropriate use of suitable technology

Study

Study time

Type	Required
Seminars	25 sessions of 4 hours (33%)
Private study	140 hours (47%)
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

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			
Group Presentations	20%	12 hours	No
Students (in groups of 2) will be given a task in applied mathematics to solve, prepare slides and script and present their solution. The emphasis will be on presentation skills including mathematical content, logical argument and structure. It is expected that each student will present for a minimum of 6 minutes.			
Reassessment component			
Presentation			No
For the reassessment, it is assumed that the problem-solving and slide + script preparation have been completed by the originally assigned group. The 'presentation' component, however, will be evaluated individually. The emphasis will be on presentation skills including mathematical content, logical argument and structure. It is expected that the student will present for a minimum of 6 minutes.			
Assessment component			
Class Test	30%	18 hours	No
An in-person class test testing material from Term 1 of the course			
Reassessment component is the same			
Assessment component			
Final Examination	50%	30 hours	No
Formula booklet will be provided. Only university approved calculators are permitted in this examination.			

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

Weighting

Study time

**Eligible for self-
certification**

Reassessment component is the same

Feedback on assessment

Written feedback via tabula

[Past exam papers for FP093](#)

Availability

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