

# FP039-15 Essential Mathematics

**23/24**

**Department**

Warwick Foundation Studies

**Level**

Foundation

**Module leader**

Joe Alcantara

**Credit value**

15

**Module duration**

12 weeks

**Assessment**

100% coursework

**Study location**

University of Warwick main campus, Coventry

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## Description

### Introductory description

FP039-15 Essential Mathematics

[Module web page](#)

### Module aims

To provide students with the mathematical competence necessary for subsequent degree-level study in Management or Business.

To develop students' awareness of mathematical tools for modelling the characteristics of business decisions.

### 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.

1. Number: Rational number equivalences, Numerical accuracy.
2. Algebra: Fundamentals of Algebra, Algebraic equations, Coordinate geometry, Simultaneous equations, Inequalities.

3. Discrete Maths: Graph theory, Critical path analysis, Gantt charts, Scheduling diagrams.
4. Statistics: Summary statistics; including from grouped data, Data and Data presentation, Bi-variate data, Correlation and Regression including hypothesis testing.
5. Probability: Elementary Probability, Laws of Probability, Bayes' theorem, Probability Distributions including hypothesis testing.

## Learning outcomes

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

- Evaluate a range of mathematical skills and techniques and apply them to problems that arise in a business setting
- Select and apply basic statistical techniques and statistical methodologies in order to analyse a range of problems in a business setting
- To apply diagrams, graphs and technology to help explore mathematical situations and analyse these in a business and real-world context
- Apply probability concepts to model uncertain real-world contexts and understand the outcomes.

## Indicative reading list

Essential Maths for Business and Management (Morris, 2007)

Foundation Maths (Croft and Davison, 2016)

[View reading list on Talis Aspire](#)

## Interdisciplinary

The module takes Mathematics and applies it directly to the real world of business to solve problems effectively and efficiently and with verifiable significance.

## Subject specific skills

Hypothesis testing to verify significance, numeracy, use of technology and power of analysis to decide methodology.

## Transferable skills

Presentation, groupwork, delivering a project, report writing, technical analysis of real world problems.

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## Study

## Study time

Type	Required
Lectures	12 sessions of 1 hour (8%)
Seminars	36 sessions of 1 hour (24%)
Private study	72 hours (48%)
Assessment	30 hours (20%)
Total	150 hours

## Private study description

Independent study

## Costs

No further costs have been identified for this module.

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## Assessment

You must pass all assessment components to pass the module.

### Assessment group A2

	Weighting	Study time
Project Management Coursework	50%	15 hours
Presentation of work as a group to highlight individual work and final conclusions on cost. Individuals are project managers, for one of 3 projects, for one construction company. Max 4 Minutes per person plus brief final conclusion. Along with submission of individual analysis as a separate document. Communication via forum on Moodle/Teams.		
End of module test	50%	15 hours
Statistics and Hypothesis testing formal calculations needed for undergraduate study.		

## Feedback on assessment

Student to view feedback on presentation in class.  
Tabula.

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## Availability

## **Courses**

This module is Core for:

- Year 1 of FIOE Warwick International Foundation Programme