Subject Information

For students entering Foundation Year

Fundamental Mathematics ,
Mathematics ,
Advanced Mathematics

Monash University Foundation Year Programme

What is Fundamental Mathematics ?

Fundamental Mathematics has been designed to cater for students to develop strong numeracy skills across areas of mathematics that have links to tertiary studies with a "business" focus or to studies where strength in numeracy opens up a range of opportunities.

Students may choose to study either Fundamental Mathematics or Mathematics, but not both.

Please check university course requirements before making your decision.

Fundamental Mathematics consists of two units: Unit 1: Pattern in Number and Unit 2: Contexts for Mathematics

Unit 1: Pattern in Number

Study Areas covered are:

- Linear & Non-linear Algebra and Applications
- Sequences and Series
- Business Mathematics

Unit 2: Contexts for Mathematics

Study Areas covered are:

- Univariate Statistics
- Bivariate Statistics & Time Series
- Linear Programming

An approved graphics calculator is compulsory for this course.

How is the subject assessed?

- Internal Assessment Tasks– topic tests and assignments (total of 60% of grade)
- Class, homework, and online engagement/ participation (10%)
- Final Examination (external) (30% of grade)

What is Mathematics ?

Mathematics has been designed to cater for a wide range of student needs and is a prerequisite for most University courses. The subject will provide students with a broad range of mathematical knowledge and skills which will prepare students for a variety of University courses.

Those students who wish to undertake tertiary courses involving a significant amount of Mathematics should take Advanced Mathematics in conjunction with Mathematics

Mathematics consists of two units: Unit 1: Functions and Derivatives and Unit 2: Integration, Probability and Statistics

Prerequisite:

Year 11 Mathematics or equivalent is preferred.

Unit 1: Functions and Derivatives

Study Areas covered are:

- Power functions & their graphs
- Exponential, Logarithmic and Circular Functions
- Techniques & Applications of Derivatives

Unit 2: Integration, Probability and Statistics

Study Areas covered are:

- Integration
- Probability and Probability Distributions
- Statistics

An approved graphics calculator is compulsory for this course.

How is the subject assessed?

As for Fundamental Mathematics.

What is Advanced Mathematics ?

Advanced Mathematics is designed to extend, both in depth and breadth, the mathematical studies undertaken in Mathematics. It is designed for students who wish to take University courses that have a high mathematical content, or which use a considerable amount of mathematical reasoning.

Advanced Mathematics consists of two units: Unit 1: Essential Concepts and Unit 2: Calculus with Applications

Prerequisite:

It is assumed students studying Advanced Mathematics will be concurrently studying, or will have completed Mathematics. Hence, all prerequisite knowledge for Mathematics is assumed for Advanced Mathematics.

Successful completion of Unit 1 is a prerequisite for attempting Unit 2.

Unit 1: Essential Concepts

Study Areas covered are:

- Vectors and Matrices
- Trigonometry and Complex Numbers
- Techniques & Applications of Differentiation

Unit 2: Calculus with Applications

Study Areas covered are:

- Techniques and Applications of Integration
- Derivatives and Differential Equations
- Kinematics and Vector Calculus

How is the subject assessed?

As for Fundamental Mathematics.

Find out more about where MUFY Mathematics courses can take you!

The following Monash University courses *do not require* any Mathematics

Art, Design and Architecture

Architectural Design, Caulfield

Communication Design, Caulfield

Fine Art, Caulfield

Industrial Design, Caulfield

Interior Architecture, Caulfield

Arts

Arts, Clayton or Caulfield

Arts (Social Science), Malaysia

Communication, Malaysia

Journalism, Caulfield

Music, Clayton

Law

Laws, Clayton

Monash University courses that *require* Fundamental Mathematics (Mathematics is also *accepted* for these courses)

Business and Economics

Business, Caulfield

Business (Accounting), Caulfield

Business (Banking and Finance), Caulfield

Business (Law), , Caulfield

Business (Marketing), Caulfield

International Business, City

Education

Bachelor of Education (Early Years and Primary, Primary and Secondary), Berwick

Information Technology

Business Information Systems, Clayton

Informatics and Computation Advanced, Clayton

Monash University courses that *require* Mathematics (Fundamental Mathematics is not accepted for these courses)

Business and Economics

Commerce, Clayton & Malaysia

Commerce (Accounting and Finance), Clayton

Economics, Clayton

Medicine

Biomedical Science, Clayton

Pharmaceutical Science, Parkville

Pharmacy, Parkville

Nursing, Clayton and Peninsula

Science

Computer Science, Clayton

Science (e.g. Astrophysics, Mathematics, Biochemistry, Physics etc.), Clayton

Monash University courses for which Advanced Mathematics is *recommended* (Advanced Mathematics is not required for any university courses)

Science

Science (e.g. Astrophysics, Biochemistry, Physics etc.), Clayton

Science Advanced - Research, Clayton

Science Advanced – Global Challenges, Clayton

Engineering

Aerospace Engineering, Clayton

For more information, speak to any of the MUFY Mathematics teachers at Monash College