

A Level Further Mathematics: Edexcel

Overview: A Level Further Mathematics is an advanced course that builds upon the concepts learned in A Level Mathematics, offering deeper insights into mathematical theory and its applications. At our UTC, the course is taught in a supportive environment where students can engage with challenging topics and apply their skills to practical and industry-relevant projects. The curriculum is designed to foster analytical thinking and problem-solving abilities, preparing students for the mathematical demands of STEM degrees and careers.

Why Study A Level Further Maths?

Further Mathematics is ideal for students with a strong interest in mathematics who wish to delve deeper into complex concepts and methods. It is highly regarded by universities, particularly for degrees in Mathematics, Physics, Engineering, and Computer Science. The course enhances understanding of advanced topics such as matrices, complex numbers, and differential equations, which are fundamental in many scientific and engineering fields. Studying this course at a UTC offers unique opportunities to see the practical applications of these concepts through projects and industry engagement.

Potential Career Pathways:

A Level Further Mathematics is highly valued for university courses such as:-

- Mathematics
- Physics
- Engineering
- Computer Science
- Economics, and more.

It is particularly beneficial for students aiming to attend competitive universities or pursue research-intensive degrees. It opens doors to careers in data science, finance, engineering, software development, and scientific research.

Topics Covered:

Pure Mathematics:

A: Proof

B: Complex Numbers

C: Matrices

D: Further Algebra and Functions

E: Further Calculus

F: Further Vectors

G: Polar Coordinates

H: Hyperbolic Functions

I: Differential Equations

J: Numerical Methods

Assessment:

- **Paper 1 & 2: Focus on core pure mathematics topics (A-J).**
 - Written exam: 2 hours
 - 100 marks
 - 33⅓% of A Level
- **Paper 3 Options: Choose one option from the following:**
 - Option 1: Discrete Mathematics & Statistics
 - Option 2: Statistics & Mechanics
 - Option 3: Mechanics & Discrete Mathematics

Each option is assessed through a 2-hour written exam, 100 marks, and 33⅓% of the A Level.

Entry Requirements:

- Grade 7 in GCSE Mathematics
- Must be taken alongside A Level Mathematics

