



Course Requirements

GCSE Mathematics – Grade 7

Syllabus

AQA

Who to Contact

Mr N Houghton
Course Leader

Overview

The course aims to develop a student's skills beyond A-level Mathematics. They will use and apply standard techniques. Students will reason, interpret and communicate mathematically. They will solve problems within mathematics and in other contexts to broaden their mathematical experience.

- A-level Further Mathematics content contains a proportion of optional content, defined by the exam board.
- The applied content is drawn from 2 of discrete maths, statistics and mechanics.

Students will take three linear exams, each of 2 hours, being assessed at the end of the course on:

- Paper 1 - proof, complex numbers, matrices, further algebra and functions, further calculus, further vectors, polar coordinates, hyperbolic functions, differential equations, trigonometry, numerical methods and coordinate geometry.
- Paper 2 - proof, complex numbers, matrices, further algebra and functions, further calculus, further vectors, polar coordinates, hyperbolic functions, differential equations, trigonometry, numerical methods and coordinate geometry.
- Paper 3 - choose one of the following routes: Discrete maths and Statistics; Statistics and Mechanics or Mechanics and Discrete maths.
- Mechanics - dimensional analysis, momentum and collisions, work, energy and power, circular motion.
 1. Statistics – discrete random variables, Poisson distribution, type I and II errors and power of a test, continuous random variables, exponential distribution, and inference.
 2. Discrete – graphs, networks, network flow, linear programming, critical path analysis, game theory for zero sum games, binary operations and group theory.

You

Students need to be very confident mathematically and have very good algebra skills.

If you enjoy maths and you think you may wish to take a degree at a good university in Mathematics, Physics, Engineering, Architecture, Computer Science or Economics you should seriously consider Further Maths.

Year 11 pupils should ask their Mathematics teacher to see if he/she thinks they are suited to the course.