

SUBJECT GUIDE:

Exam Board - Edexcel
1 year - AS
2 years - A Level
1 year - AS and A2

WHY CHOOSE FURTHER MATHEMATICS

Further Mathematics is particularly suited to those of you who have a keen interest and ability in mathematics and perhaps intend to proceed to Higher Education on a course which demands a high level of mathematics. It is particularly advantageous for anyone considering taking a degree course in Mathematics, Engineering, Computing or a Theoretical Science. Many universities still prefer students to have studied Mathematics and Further Mathematics if they wish to proceed onto a degree course in mathematics. It is also for those of you who enjoy and can meet the challenge that mathematics at this level can provide.

HOW WE STUDY FURTHER MATHEMATICS

Achievement in Post 16 Mathematics relies on hard work, motivation and commitment. Every lesson generates at least one hour of private study and students will complete set work relating to new topics. You are advised to make full use of Maths Workshops that are available throughout their one or two years of study.

ENTRY REQUIREMENTS

A Level Further Mathematics:
Due to the large amount of mathematical content involved in taking two mathematics A levels, a grade 8 or grade 9 in GCSE Mathematics is essential.

WHAT WE STUDY: AS LEVEL

AS Syllabus consists two units, one of them being Core Pure Maths and any one unit from the ten options.

Paper 1: **Core Pure Mathematics**
Written examination: 1 hour and 40 minutes
50% of the qualification
80 marks

Paper 2: **Further Mathematics Options**
Written examination: 1 hour and 40 minutes
50% of the qualification
80 marks

Students take one of the following ten options:

2A: Further Pure Mathematics 1 and Further Pure Mathematics 2

2B: Further Pure Mathematics 1 and Further Statistics 1

2C: Further Pure Mathematics 1 and Further Mechanics 1

2D: Further Pure Mathematics 1 and Decision Mathematics 1

2E: Further Statistics 1 and Further Mechanics 1

2F: Further Statistics 1 and Decision Mathematics 1

2G: Further Statistics 1 and Further Statistics 2

2H: Further Mechanics 1 and Decision Mathematics 1

2J: Further Mechanics 1 and Further Mechanics 2

2K: Decision Mathematics 1 and Decision Mathematics 2

How you will be Assessed

The Pearson Edexcel Level 3 AS GCE in Further Mathematics consists of two externally-examined papers.

Students must complete all assessments in May/June in any single year.

WHAT WE STUDY: A LEVEL

A Level Syllabus consists four units, two of them being Core Pure Maths 1 & 2 and any two units from the following list.

Paper 1: **Core Pure Mathematics 1**

Paper 2: **Core Pure Mathematics 2**

Each paper is:

1 hour and 30 minutes written examination

25% of the qualification

75 marks

Proof, Complex numbers, Matrices, Further algebra and functions, Further calculus, Further vectors, Polar coordinates, Hyperbolic functions, Differential equations

Paper 3: **Further Mathematics Option 1**

Written examination: 1 hour and 30 minutes

25% of the qualification

75 marks

Students take one of the following four options:

A: Further Pure Mathematics 1

B: Further Statistics 1

C: Further Mechanics 1

D: Decision Mathematics 1

Paper 4: **Further Mathematics Option 2**

Written examination: 1 hour and 30 minutes

25% of the qualification

75 marks

Students take one of the following seven options:

A: Further Pure Mathematics 2

B: Further Statistics 1

C: Further Mechanics 1

D: Decision Mathematics 1

E: Further Statistics 2

F: Further Mechanics 2

G: Decision Mathematics 2

HOW YOU WILL BE ASSESSED

The Pearson Edexcel Level 3 Advanced GCE in Further Mathematics consists of four externally-examined papers.

Students must complete all assessments in May/June in any single year.

PROGRESS PATHS

Mathematics is essential if you want to study for a Mathematics degree and is often necessary for Physics, Engineering or Computing. It can also provide useful support for studies in Biology, Chemistry, Finance, Business, Economics and Social Sciences.

An A and AS Level in Mathematics demonstrates that you have a level of numerical and problem solving skills which are well above average, making you particularly valued by employers and higher education establishments.

THE MATHEMATICS DEPARTMENT

Kandiah Vasanthakumaran

Head of Mathematics

Joined the College in September 2000. Kandiah is qualified with BSc Hons. (Mathematics), MSc (Computational Mathematics with Modelling - Brunel), and PGCE (Post compulsory- Institute of education) and has taught Mathematics since 1996. He has been a GCE Mathematics examiner for Edexcel since 2003.

Ragulan Amirthalingam

Joined the College in September 2001. Ragulan is qualified with B Eng Hons. (City) and also successfully completed the 'Preparing to teach in lifelong learning' course. He has taught Mathematics since 2000. He has been a GCE Mathematics examiner for Edexcel since 2005.