

SUBJECT: MATHEMATICS

QUALIFICATION: AS/A2

QUALIFICATION LEVEL: 3

QUALIFICATION TYPE: ADVANCED/ADVANCED SUBSIDIARY GCE

AWARDING BODY: OCR (MEI)

CATEGORY: MATHEMATICS

Qualification Accreditation Number (QAN): A/S Level: (3895) 100/3417/1
A-Level: (7895) 100/3418/3

DESCRIPTION

This course will encourage students to:

- develop their understanding of mathematics and mathematical processes in a way that promotes confidence and fosters enjoyment;
- develop abilities to reason logically and recognise incorrect reasoning, to generalise and to construct mathematical proofs;
- extend their range of mathematical skills and techniques and use them in more difficult, unstructured problems;
- develop an understanding of coherence and progression in mathematics and of how different areas of mathematics can be connected;
- recognise how a situation may be represented mathematically and understand the relationship between 'real world' problems and standard and other mathematical models and how these can be refined and improved;
- use mathematics as an effective means of communication;
- read and comprehend mathematical arguments and articles concerning applications of mathematics;
- acquire the skills needed to use technology such as calculators and computers effectively, recognise when such use may be inappropriate and be aware of limitations;
- develop an awareness of the relevance of mathematics to other fields of study, to the world of work and to society in general;
- take increasing responsibility for their own learning and the evaluation of their own mathematical development.

WHAT WILL I LEARN?

A/S Level

- Introduction to Advanced Mathematics (C1)
- Concepts for Advanced Mathematics (C2)
- Statistics 1 (S1)

A Level (all of the above with the following additional units)

- Methods for Advanced Mathematics (C3)
- Applications of Advanced Mathematics (C4)
- Mechanics 1 (M1)

For details of content, please refer to the specification at http://www.ocr.org.uk/download/kd/ocr_10095_kd_l_gce_spec.pdf

WHAT ARE THE ENTRY REQUIREMENTS?

At least Grade B in GCSE Mathematics

HOW WILL I BE ASSESSED?

Entry Code	Unit Code	Level	Unit Name	Examination Questions (approximate mark allocation)	Time (hours)
4751	C1	AS	Introduction to Advanced Mathematics	Section A: 8-10 $\times \leq 5 = 36$ Section B: 3 $\times 12 = 36$	1½
4752	C2	AS	Concepts for Advanced Mathematics	Section A: 8-10 $\times \leq 5 = 36$ Section B: 3 $\times 12 = 36$	1½
4766	S1	AS	Statistics	Section A: 5-7 $\times \leq 8 = 36$ Section B: 2 $\times 18 = 36$	1½
4753	C3	A2	Methods for Advanced Mathematics	Section A: 5-7 $\times \leq 8 = 36$ Section B: 2 $\times 18 = 36$ Coursework: 18	1½
4754	C4	A2	Applications of Advanced Mathematics Paper A	Section A: 5-7 $\times \leq 8 = 36$ Section B: 2 $\times 18 = 36$	1½
			Applications of Advanced Mathematics Paper B	Comprehension: 18	1
4761	M1	AS	Mechanics	Section A: 5-7 $\times \leq 8 = 36$ Section B: 2 $\times 18 = 36$	1½

FUTURE OPPORTUNITIES?

Universities and employers hold an A level qualification in Mathematics in high regard and Mathematicians are highly employable due to their strong analytical and reasoning skills.

An A-level in mathematics provides not only an in depth study of mathematics but also aims to develop those skills essential for a successful career in areas such as mathematics, physics, actuarial science, statistics, engineering, operations research, computer science, business and industrial management, economics, finance, chemistry, geology, life sciences, behavioural sciences and cryptography.

FURTHER INFORMATION

- There is no limit to the number of times a candidate may re-sit each of the 6 units (the best result will count.)
- Examinations are available in January and June