

Mathematics A Level - AQA Syllabus

Key Information

Course Format:

Paper Based Course Materials

Price:

£395.00

Assessment:

3 Examinations

Payment Options:

Spread the cost over 4 monthly payments

Approximate Study Time:

700 Hours of Self Study

Initial Payment of

£185.00

Approximate Delivery Time:

7 Working Days (Courier Service)

Followed by 3 payments of:

£70.00

Handwritten mathematical formulas including differentiation and limits:

$$y = u^2 + 3\sqrt{u-1} \quad u = x^2 + 1 \quad \frac{dy}{dx} =$$
$$= (2u + \frac{3}{2\sqrt{u-1}}) \cdot \frac{du}{dx} = (2u + \frac{3}{2\sqrt{u-1}}) \cdot 2x$$
$$= (2(x^2 + 1) + \frac{3}{2\sqrt{x^2 + 1 - 1}}) \cdot 2x$$
$$= (2x^2 + 2 + \frac{3}{2\sqrt{x^2}}) \cdot 2x$$
$$= (2x^2 + 2 + \frac{3}{2|x|}) \cdot 2x$$
$$= (1 + \frac{2}{x})^{x+5} = ((1 + \frac{2}{x})^{\frac{x}{2}})^2 \cdot (1 + \frac{2}{x})^5$$
$$\lim_{x \rightarrow a} \sqrt[p]{f(x)} = \sqrt[p]{\lim_{x \rightarrow a} f(x)}$$
$$\lim_{x \rightarrow a} b^{f(x)} = b^A \quad b = \text{const}, \lim_{x \rightarrow a} f(x) = A$$

The **Mathematics A Level Course** is designed to help a student's understanding of mathematics and mathematical processes in a way that promotes confidence and fosters enjoyment. Maths is one of the biggest facilitating subjects and a good grounding in Mathematics is not only intellectually rewarding, but also essential for many higher education courses and careers.

This home study course will cover the full A-Level syllabus. There is an AS Level Course available for students who don't want to complete the full A Level.

Each lesson begins with a set of clearly stated objectives and an explanation of its place in the overall programme of study. Effective learning is encouraged through frequent activities and self-assessment questions. There are 24 Tutor-Marked Assignments (known as TMAs).

Students will also receive a free year of MarkIt!!. Markit!! is built by educationalists and mathematicians to give Maths students step-by-step preparation for their examination.

This course is divided into the following modules:

● Module 1 – Pure Core 1

The following topics are covered: Modelling and Proof; Algebra; Surds; Straight Lines; Quadratic Equations and Functions; Polynomials; Further Algebra; The Coordinate Geometry of the Circle; Differentiation; and Integration.

● Module 2 – Pure Core 2

The following topics are covered: Indices; Further Differentiation and Integration; Trigonometry (1); Graphs and Transformations; Trigonometry (2); Binomial Expansions; Exponential Functions and Logarithms; and Vectors.

● Module 3 – Mechanics 1

The following topics are covered: Kinematics; and Forces.

● Module 4 – Statistics 1

The following topics are covered: Statistical Data; Probability; and The Binomial Distribution.

● Module 5 – Pure Core 3

The following topics are covered: Functions; Composite Transformations and the Modulus Function; Inverse and Reciprocal Trigonometric Functions; The Exponential and Natural Logarithm Functions; Further Differentiation; Numerical Methods for Solving Equations; Further Integration; and Volumes of Revolution and Numerical Integration.

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• Module 6 – Pure Core 4

The following topics are covered: The General Binomial Expansion; Algebraic Fractions; Further Differentiation; Parametric Equations; Further Trigonometry; Growth and Decay and Differential Equations; and Vector Geometry.

• Module 7 – Mechanics 2

The following topics are covered: Moments and Forces in Equilibrium; Centres of Gravity; Plane Laminae Suspended from a Point; Motion in a Line; Motion of a Particle in 2D & 3D; Work & Power; Hooke's Law & Energy; Uniform Circular Motion; and The Conical Pendulum and Vertical Circular Motion.

• Module 8 – Statistics 2

The following topics are covered: Discrete Probability Distributions; Poisson Distributions; Continuous Probability Distributions and the Rectangular Distribution; Confidence Limits; Hypothesis Testing; and χ^2 - test and Contingency Tables.

The Syllabus:

This course prepares candidates for the AQA Mathematics A level Specification 7357, for all examinations in May/June 2019 or later years.

Examinations:

- **Paper 1:** Mathematics 1 (2 Hours) is 100 marks and 33.33% of the total A Level marks.

Paper 1 covers any content from: Proof; Algebra and functions; Coordinate geometry; Sequences and series; Trigonometry; Exponentials and logarithms; Differentiation; Integration; and Numerical methods.

- **Paper 2:** Mathematics 2 (2 Hours) is 100 marks and 33.33% of the total A Level marks.

Paper 2 covers any content from: Vectors; Quantities and units in mechanics; Kinematics; Forces and Newton's laws; and Moments.

- **Paper 3:** Mathematics 3 (2 Hours) is 100 marks and 33.33% of the total A Level marks.

Paper 3 covers any content from: Statistical sampling; Data presentation and Interpretation; Probability; Statistical distributions; and Statistical hypothesis testing.

Practical Skills/Coursework:

There is no Coursework with this syllabus.

Prerequisites:

We will admit Candidates for A Level Courses who have a minimum of 4 GCSEs at grade C and above. This must include Mathematics GCSE (Higher Tier).

Please Note: We cannot accept students who are under 18 years old on this course. We do have an alternative course option for students who are under 18. Please email us if you require additional information about this alternative course.

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Additional Reading:

The following books are required to work alongside your course materials:

- AQA A Level Maths: Year 1 / AS Student Book (ISBN: 978-0435513306)
- AQA A Level Maths: Year 2 Student Book (ISBN: 978-0198412960)

Alternatively, you can buy these two books combined (ISBN-13: 978-0198412946)

Student Support:

Every student receives a personal tutor with whom they should keep in regular contact. All tutors are fully qualified experienced teachers holding either a Postgraduate Certificate in Education or a degree in education. Most work from home and are able to offer flexible contact times. The tutor will contact students with an introductory letter and a telephone call to help decide on a study plan. They will also let the student know the best ways and times for contact.

There is no limit on how often you can contact your tutor. The advice and encouragement our tutors provide are an important part of your learning experience. You can contact your tutor by Phone, Post or Email. There are tutor-marked assignments (TMA's) in every course. These help the student to consolidate their learning and prepare for examinations.

All tutors have a Freephone 0800 telephone number and most will have Skype capabilities. Whilst you are still actively submitting assignments, you should expect to be in contact with your tutor regularly. Remember, to get the most out of your tutor, you will need to tell them when you need assistance.

Examination Centres & Examination Fees:

All distance learning students will sit their exams as a private candidate in a registered school or college. The finding of an examination centre and the booking of exams is the responsibility of the student. In December/January students are contacted and advised to start arranging their examinations.

AQA have over 300 exam centres in the UK. Examination officers are available for registered students for advice on finding suitable centres or you can use AQA's Private Candidate Page which details information about being a private candidate and has a search facility showing a small selection of centres set out geographically.

All AS and A2 Level exams can be sat in the same May/June exam window so it is up to the student whether they sit their exams in a single sitting or over multiple exam windows. Examination fees need to be paid direct to your chosen exam centre. Prices for exams will vary depending on the exam centre's administration costs so it is worth contacting a few centres to compare prices.

Nearest Examination Dates:

Please review the A Level Overview page for detailed information on possible examination dates and procedures.

Studying from Abroad:

It is possible to study A Level Courses from anywhere in the world. However some courses are easier to study from abroad than others and some restrictions to the type of tuition available apply. If you wish to study an A Level then you will need to sit the examinations in the UK. Please remember that most A Level's have several examinations which may well be spread over several weeks.