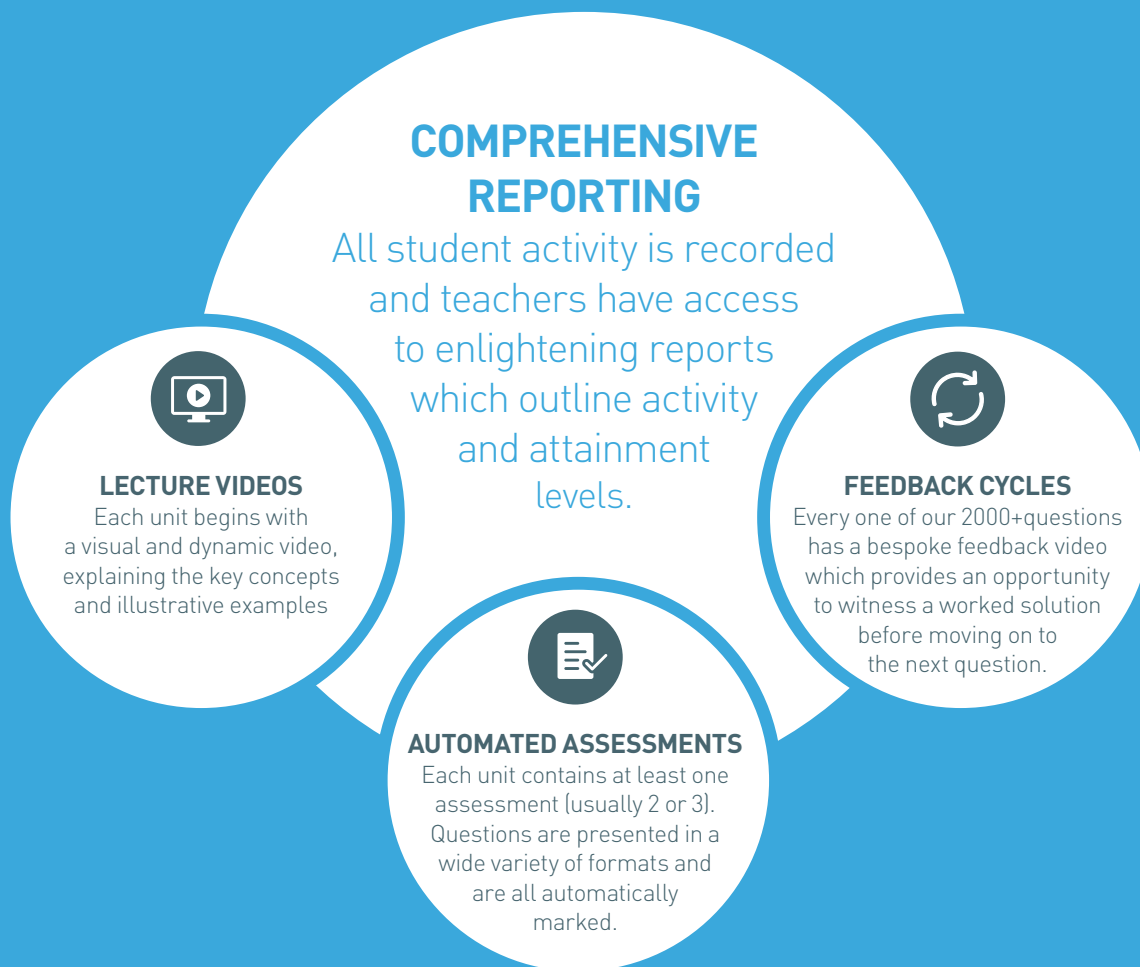


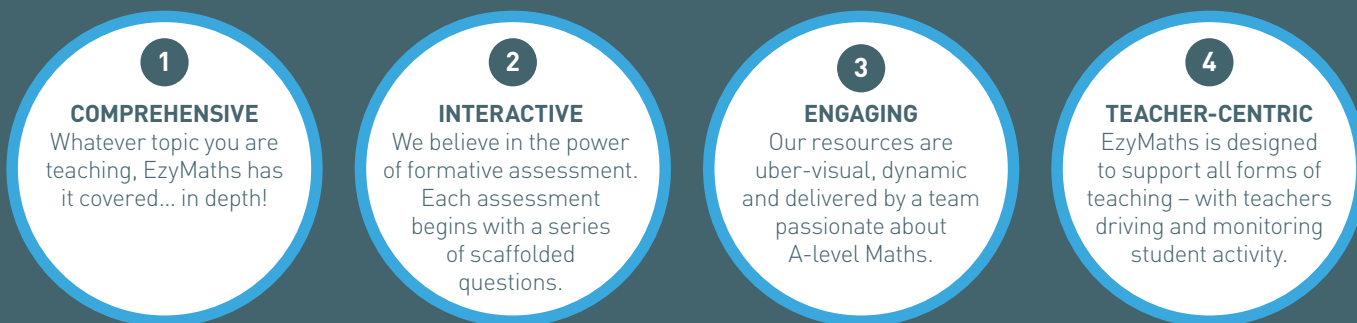
A-LEVEL COURSE GUIDE

**EzyMaths covers both AS and A-level
and provides full content coverage.**

OUR MODEL



WHEN CREATING EZYMATHS, WE WANTED EVERY VIDEO AND ASSESSMENT TO ADHERE TO 4 KEY PRINCIPLES:



POTENTIAL USES

EzyMaths is designed to put teachers in charge and be used to support a wide variety of approaches. Here are just some examples:



AUTOMATED ASSESSMENTS

With over 200 assessments, covering the entire course, you can set plenty of work every week as you teach the syllabus.



FLIPPED LEARNING

Use EzyMaths to support flipped classrooms and blended learning. Know for sure whether or not students have completed their preparations.



MONITORING & INTERVENTION

Use our comprehensive reports to monitor student completion and identify problem areas to focus on in class.



PARENTS' EVENINGS

Print off our automated reports and hand them out at Parents' Evenings. Easy to evidence student effort and attainment levels.



REVISION TOOL

EzyMaths is the ideal revision tool. When exams approach, students have 24/7 access to resources covering every single topic in depth.

MATHS – COURSE OUTLINE

SECTION 1 PROOF

SECTION 2 ALGEBRA AND FUNCTIONS

| | |
|----|--------------------|
| AS | = AS Material ONLY |
| L | = Lecture |
| A | = Assessment |

Module 1 Methods of Proof and Disproof

| | | | |
|--------------|--------------------------------|---|----|
| A1.1 | Proof by Deduction | L | AS |
| A1.1b | Proof by Deduction | A | AS |
| A1.2 | Exhaustion and Counterexamples | L | AS |
| A1.2a | Exhaustion and Counterexamples | A | AS |
| A1.2b | Exhaustion and Counterexamples | A | AS |

Module 2 Harder Proofs

| | | | |
|--------------|--------------------------------|---|--|
| A2.1 | Proof by Contradiction | L | |
| A2.1a | Proof by Exhaustion | A | |
| A2.2 | More Challenging Proofs | L | |
| A2.2a | Disproof by Counter Example | A | |
| A1.2b | Exhaustion and Counterexamples | A | |

Module 1 Indices and Surds

| | | | |
|--------------|-------------------------------|---|----|
| B1.1 | Laws of Indices | L | AS |
| B1.1a | Laws of Indices | A | AS |
| B1.1b | Laws of Indices | A | AS |
| B1.1c | Laws of Indices | A | AS |
| B1.2 | Manipulating Surds | L | AS |
| B1.2a | Manipulating Surds | A | AS |
| B1.3 | Rationalising the Denominator | L | AS |
| B1.3a | Rationalising the Denominator | A | AS |

Module 2 Quadratics

| | | | |
|--------------|--|---|----|
| B2.1 | Introduction to Quadratic Functions and Graphs | L | AS |
| B2.1a | Introduction to Quadratic Functions and Graphs | A | AS |
| B2.2 | Factorising | L | AS |
| B2.2a | Factorising | A | AS |
| B2.2b | Factorising | A | AS |
| B2.3 | Completing the Square | L | AS |
| B2.3a | Completing the Square | A | AS |
| B2.4 | The Quadratic Formula | L | AS |
| B2.4a | The Quadratic Formula | A | AS |
| B2.5 | The Discriminant | L | AS |
| B2.5a | The Discriminant | A | AS |
| B2.5b | The Discriminant | A | AS |

Module 3 Simultaneous Equations

| | | | |
|--------------|---|---|----|
| B3.1 | Linear Simultaneous Equations | L | AS |
| B3.1a | Linear Simultaneous Equations | A | AS |
| B3.2 | Simultaneous Equations with a Quadratic | L | AS |
| B3.2a | Simultaneous Equations with a Quadratic | A | AS |

Module 4 Inequalities

| | | | |
|--------------|--|---|----|
| B4.1 | Solving Linear Inequalities | L | AS |
| B4.1a | Solving Linear Inequalities | A | AS |
| B4.2 | Solving Quadratic Inequalities | L | AS |
| B4.2a | Solving Quadratic Inequalities Graphically | A | AS |
| B4.3 | Representing Inequalities Graphically | L | AS |
| B4.3a | Representing Inequalities Graphically | A | AS |

Module 5 Manipulating Polynomials

| | | | |
|--------------|-----------------------------|---|----|
| B5.1 | Introduction to Polynomials | L | AS |
| B5.1a | Introduction to Polynomials | A | AS |
| B5.2 | Algebraic Simplification | L | AS |
| B5.2a | Algebraic Simplification | A | AS |
| B5.3 | Algebraic Division | L | AS |
| B5.3a | Algebraic Division | A | AS |
| B5.4 | Factor Theorem | L | AS |
| B5.4a | Factor Theorem | A | AS |
| B5.4b | Factor Theorem | A | AS |

Module 6 Sketching and Using Graphs

| | | | |
|--------------|---------------------------------------|---|----|
| B6.1 | Introduction to Sketching | L | AS |
| B6.1a | Introduction to Sketching | A | AS |
| B6.2 | Sketching Quadratics | L | AS |
| B6.2a | Sketching Quadratics | A | AS |
| B6.3 | Sketching Cubics | L | AS |
| B6.3a | Sketching Cubics | A | AS |
| B6.4 | Sketching Higher Order Polynomials | L | AS |
| B6.4a | Sketching Higher Order Polynomials | A | AS |
| B6.5 | Modulus Graphs | L | |
| B6.5a | Modulus Graphs | A | |
| B6.6 | Reciprocal Graphs | L | AS |
| B6.6a | Reciprocal Graphs | A | AS |
| B6.7 | Proportional Relationships and Graphs | L | AS |
| B6.7a | Proportional Relationships and Graphs | A | AS |
| B6.8 | Interpreting solutions graphically | L | AS |
| B6.8a | Interpreting solutions graphically | A | AS |

Module 7 Functions

| | | | |
|--------------|-------------------------------|---|--|
| B7.1 | Functions, Domains and Ranges | L | |
| B7.1a | Functions, Domains and Ranges | A | |
| B7.2 | Composite Functions | L | |
| B7.2a | Composite Functions | A | |
| B7.3 | Inverse Functions | L | |
| B7.3a | Inverse Functions | A | |

Module 8 Transformations

| | | | |
|--------------|--------------------------|---|----|
| B8.1 | Translations | L | AS |
| B8.1a | Translations | A | AS |
| B8.2 | Enlargements | L | AS |
| B8.2a | Enlargements | A | AS |
| B8.3 | Reflections | L | AS |
| B8.3a | Reflections | A | AS |
| B8.4 | Combined Transformations | L | |
| B8.4a | Combined Transformations | A | |

Module 9 Partial Fractions

| | | | |
|--------------|----------------------------|---|--|
| B9.1 | Simple Partial Fractions | L | |
| B9.1a | Simple Partial Fractions | A | |
| B9.2 | Advanced Partial Fractions | L | |
| B9.2a | Advanced Partial Fractions | A | |

Each unit contains at least 1 lecture video and usually 2 or 3 assessments

MATHS – COURSE OUTLINE

SECTION 3 COORDINATE GEOMETRY

SECTION 4 SEQUENCES AND SERIES

| | |
|----|--------------------|
| AS | = AS Material ONLY |
| L | = Lecture |
| A | = Assessment |

Module 1 Straight Lines

| | | | |
|--------------|---|---|----|
| C1.1 | Basic Equation of a Straight Line | L | AS |
| C1.1a | Basic Equation of a Straight Line | A | AS |
| C1.2 | Other Straight Line Equation Formats | L | AS |
| C1.2a | Other Straight Line Equation Formats | A | AS |
| C1.3 | Finding the Equation of a Straight Line | L | AS |
| C1.3a | Finding the Equation of a Straight Line | A | AS |
| C1.4 | Parallel and Perpendicular Lines | L | AS |
| C1.4a | Parallel and Perpendicular Lines | A | AS |

Module 2 Circles

| | | | |
|--------------|---|---|----|
| C2.1 | The Equation of a Circle | L | AS |
| C2.1a | The Equation of a Circle | A | AS |
| C2.2 | Completing the square to find the centre and radius of a circle | L | AS |
| C2.2a | Completing the square to find the centre and radius of a circle | A | AS |
| C2.3 | Using Circle Theorems | L | AS |
| C2.3a | Using Circle Theorems | A | AS |

Module 3 Parametric Equations

| | | | |
|--------------|---|---|--|
| C3.1 | Introduction to Parametric Equations | L | |
| C3.1a | Introduction to Parametric Equations | A | |
| C3.2 | Using Parametric Equations | L | |
| C3.2a | Using Parametric Equations | A | |
| C3.3 | Converting between Cartesian and Parametric Equations | L | |
| C3.3a | Converting between Cartesian and Parametric Equations | A | |

Module 1 General Sequences

| | | |
|--------------|---|---|
| D1.1 | nth term Sequences | L |
| D1.1a | nth term Sequences | A |
| D1.2 | Iterative Function Sequences | L |
| D1.2a | Iterative Function Sequences | A |
| D1.3 | Increasing, Decreasing and Periodic Sequences | L |
| D1.3a | Increasing, Decreasing and Periodic Sequences | A |

Module 2 Arithmetic Sequences and Series

| | | |
|--------------|---|---|
| D2.1 | Using Arithmetic Sequences | L |
| D2.1a | Using Arithmetic Sequences | A |
| D2.2 | Find the nth Term of an Arithmetic Sequence | L |
| D2.2a | Find the nth Term of an Arithmetic Sequence | A |
| D2.3 | Sigma Notation | L |
| D2.3a | Sigma Notation | A |
| D2.4 | Sum of Arithmetic Series | L |
| D2.4a | Sum of Arithmetic Series | A |
| D2.5 | Arithmetic Sequence and Series Problems | L |
| D2.5a | Arithmetic Sequence and Series Problems | A |

SECTION 5 TRIGONOMETRY

Module 3 Geometric Sequences and Series

| | | | |
|--------------|---|---|--|
| D3.1 | Using Geometric Sequences | L | |
| D3.1a | Using Geometric Sequences | A | |
| D3.2 | Find the nth Term of a Geometric Sequence | L | |
| D3.2a | Find the nth Term of a Geometric Sequence | A | |
| D3.3 | Finite Sum of a Geometric Series | L | |
| D3.3a | Finite Sum of a Geometric Series | A | |
| D3.4 | Infinite Sum of a Geometric Series | L | |
| D3.4a | Infinite Sum of a Geometric Series | A | |
| D3.5 | Geometric Sequence and Series Problems | L | |
| D3.5a | Geometric Sequence and Series Problems | A | |
| D3.6 | Mixed Arithmetic and Geometric Problems | L | |
| D3.6a | Mixed Arithmetic and Geometric Problems | A | |

Module 4 Binomial Expansion

| | | | |
|--------------|---|---|----|
| D4.1 | Introduction to Binomial Expansion | L | AS |
| D4.1a | Introduction to Binomial Expansion | A | AS |
| D4.2 | Performing Binomial Expansions for Positive Integer n | L | AS |
| D4.2a | Performing Binomial Expansions for Positive Integer n | A | AS |
| D4.3 | Binomial Expansions with any rational n | L | |
| D4.3a | Binomial Expansions with any rational n | A | |
| D4.4 | Using Binomial Expansion to Approximate | L | |
| D4.4a | Using Binomial Expansion to Approximate | A | |

Module 1 Definitions and Rules

| | | | |
|--------------|---|---|----|
| E1.1 | Definitions of sine, cosine and tangent | L | AS |
| E1.1a | Definitions of sine, cosine and tangent | A | AS |
| E1.2 | Sine Rule | L | AS |
| E1.2a | Sine Rule | A | AS |
| E1.3 | Cosine Rule | L | AS |
| E1.3a | Cosine Rule | A | AS |
| E1.4 | Area of a Triangle | L | AS |
| E1.4a | Area of a Triangle | A | AS |

Module 2 Radians

| | | | |
|--------------|----------------------------|---|--|
| E2.1 | Radian Measure | L | |
| E2.1a | Radian Measure | A | |
| E2.2 | Arc Length and Sector Area | L | |
| E2.2a | Arc Length and Sector Area | A | |
| E2.3 | Small Angle Approximations | L | |
| E2.3a | Small Angle Approximations | A | |

Module 3 Trigonometric Functions

| | | | |
|--------------|---|---|----|
| E3.1 | Sine, cosine and tangent functions and graphs | L | AS |
| E3.1a | Sine, cosine and tangent functions and graphs | A | AS |
| E3.1b | Sine, cosine and tangent functions and graphs | A | AS |
| E3.2 | Exact Radian sine, cosine and tangent values | L | |
| E3.2a | Exact Radian sine, cosine and tangent values | A | |
| E3.3 | Secant, cosecant and cotangent functions and graphs | L | |
| E3.3a | Secant, cosecant and cotangent functions and graphs | A | |
| E3.4 | Arcsin, arccos and arctan functions and graphs | L | |
| E3.4a | Arcsin, arccos and arctan functions and graphs | A | |

Module 4 Trigonometric Formulae, Equations and Identities

| | | | |
|--------------|--|---|----|
| E4.1 | $\tan\theta = \sin\theta/\cos\theta$, $\sin^2\theta + \cos^2\theta = 1$ | L | AS |
| E4.1a | $\tan\theta = \sin\theta/\cos\theta$, $\sin^2\theta + \cos^2\theta = 1$ | A | AS |
| E4.2 | Equations involving multiple angles | L | AS |
| E4.2a | Equations involving multiple angles | A | AS |
| E4.3 | $\sec^2\theta = 1 + \tan^2\theta$, $\operatorname{cosec}^2\theta = 1 + \cot^2\theta$ | L | |
| E4.3a | $\sec^2\theta = 1 + \tan^2\theta$, $\operatorname{cosec}^2\theta = 1 + \cot^2\theta$ | A | |
| E4.4 | Using standard formulae to prove identities | L | |
| E4.4a | Using standard formulae to prove identities | A | |
| E4.5 | Compound Angle Formulae | L | |
| E4.5a | Compound Angle Formulae | A | |
| E4.6 | Double Angle Formulae | L | |
| E4.6a | Double Angle Formulae | A | |

Module 5 Manipulating $a\cos\theta + b\sin\theta$

| | | | |
|--------------|---|---|----|
| E5.1 | Expressing $a\cos\theta + b\sin\theta$ in form $y\cos(\theta \pm \alpha)$ | L | AS |
| E5.1a | Expressing $a\cos\theta + b\sin\theta$ in form $y\cos(\theta \pm \alpha)$ | A | AS |
| E5.2 | Expressing $a\cos\theta + b\sin\theta$ in form $y\sin(\theta \pm \alpha)$ | L | AS |
| E5.2a | Expressing $a\cos\theta + b\sin\theta$ in form $y\sin(\theta \pm \alpha)$ | A | AS |
| E5.3 | Harder Equations and Identities | L | |
| E5.3a | Harder Equations and Identities | A | |

Each unit contains at least 1 lecture video and usually 2 or 3 assessments

MATHS – COURSE OUTLINE

SECTION 6 EXPONENTIALS AND LOGARITHMS

SECTION 7 DIFFERENTIATION

| | |
|----|--------------------|
| AS | = AS Material ONLY |
| L | = Lecture |
| A | = Assessment |

| Module 1 Exponential Functions | | | |
|-----------------------------------|------------|---|----|
| F1.1 | a^x | L | AS |
| F1.1a | a^x | A | AS |
| F1.2 | e^x | L | AS |
| F1.2a | e^x | A | AS |
| F1.3 | $y=e^{kx}$ | L | AS |
| F1.3a | $y=e^{kx}$ | A | AS |
| F1.3b | $y=e^{kx}$ | A | AS |

| Module 2 Logarithms | | | |
|------------------------|-----------------------------------|---|----|
| F2.1 | Definition of $\log_a(x)$ | L | AS |
| F2.1a | Definition of $\log_a(x)$ | A | AS |
| F2.1b | Definition of $\log_a(x)$ | A | AS |
| F2.2 | $\ln(x)$ | L | AS |
| F2.2a | $\ln(x)$ | A | AS |
| F2.2b | $\ln(x)$ | A | AS |
| F2.3 | The Laws of Logarithms | L | AS |
| F2.3a | The Laws of Logarithms | A | AS |
| F2.3b | The Laws of Logarithms | A | AS |
| F2.3c | The Laws of Logarithms | A | AS |
| F2.4 | Using Logarithms to solve $a^x=b$ | L | AS |
| F2.4a | Using Logarithms to solve $a^x=b$ | A | AS |

| Module 3 Exponential Growth and Decay | | | |
|--|--------------------|---|----|
| F3.1 | Exponential Growth | L | AS |
| F3.1a | Exponential Growth | A | AS |
| F3.2 | Exponential Decay | L | AS |
| F3.2a | Exponential Decay | A | AS |

| Module 1 Differentiation from 1st Principles | | | |
|---|---|---|----|
| G1.1 | Rates of Change | L | AS |
| G1.1a | Rates of Change | A | AS |
| G1.2 | Derivative of $f(x)$ as the gradient of the tangent | L | AS |
| G1.2a | Derivative of $f(x)$ as the gradient of the tangent | A | AS |
| G1.3 | Differentiation of small positive integer powers of x | L | AS |
| G1.3a | Differentiation of small positive integer powers of x | A | AS |

| Module 2 Elementary Differentiation and Applications | | | |
|---|---|---|----|
| G2.1 | Differentiation of x^n for rational values of n | L | AS |
| G2.1a | Differentiation of x^n for rational values of n | A | AS |
| G2.2 | Differentiation of polynomials and simple quotients | L | AS |
| G2.2a | Differentiation of polynomials and simple quotients | A | AS |
| G2.3 | Equations of tangents and normals | L | AS |
| G2.3a | Equations of tangents and normals | A | AS |

| Module 3 Stationary Points and Curve Sketching | | | |
|---|---|---|----|
| G3.1 | Stationary Points | L | AS |
| G3.1a | Stationary Points | A | AS |
| G3.2 | Increasing and Decreasing Functions and Curve Sketching | L | AS |
| G3.2a | Increasing and Decreasing Functions and Curve Sketching | A | AS |
| G3.3 | Practical Problems | L | AS |
| G3.3a | Practical Problems | A | AS |

SECTION 8 INTEGRATION

Module 4 Points of Inflection

| | | |
|--------------|-------------------------------------|---|
| G4.1 | Stationary Points of Inflection | L |
| G4.1a | Stationary Points of Inflection | A |
| G4.2 | Non-Stationary Points of Inflection | L |
| G4.2a | Non-Stationary Points of Inflection | A |

Module 5 Product, Quotient and Chain Rules

| | | |
|--------------|---------------------------|---|
| G5.1 | Product Rule | L |
| G5.1a | Product Rule | A |
| G5.2 | Quotient Rule | L |
| G5.2a | Quotient Rule | A |
| G5.3 | Chain Rule | L |
| G5.3a | Chain Rule | A |
| G5.4 | Connected Rates of Change | L |
| G5.4a | Connected Rates of Change | A |

Module 6 Differentiation of Trigonometric, Exponential and Logarithmic Functions

| | | |
|--------------|--|---|
| G6.1 | Differentiation from 1st Principles of $\sin x$ and $\cos x$ | L |
| G6.1a | Differentiation from 1st Principles of $\sin x$ and $\cos x$ | A |
| G6.2 | Differentiation of $\sin kx$, $\cos kx$, $\tan kx$ | L |
| G6.2a | Differentiation of $\sin kx$, $\cos kx$, $\tan kx$ | A |
| G6.3 | Differentiation of e^{kx} and a^{kx} | L |
| G6.3a | Differentiation of e^{kx} and a^{kx} | A |
| G6.4 | Differentiation of $\ln x$ | L |
| G6.4a | Differentiation of $\ln x$ | A |

Module 7 Differentiation of Implicit and Parametric Functions

| | | |
|--------------|---|---|
| G7.1 | Differentiation of Implicit Functions | L |
| G7.1a | Differentiation of Implicit Functions | A |
| G7.2 | Differentiation of Parametric Functions | L |
| G7.2a | Differentiation of Parametric Functions | A |

Module 1 Elementary Integration and Applications

| | | | |
|--------------|---|---|----|
| H1.1 | Fun. Theorem of Calculus and indef. integration of positive integer powers of x | L | AS |
| H1.1a | Fun. Theorem of Calculus and indef. integration of positive integer powers of x | A | AS |
| H1.2 | Indefinite integration of rational powers of x excluding -1 | L | AS |
| H1.2a | Indefinite integration of rational powers of x excluding -1 | A | AS |
| H1.3 | Area under a Curve | L | AS |
| H1.3a | Area under a Curve | A | AS |
| H1.4 | Definite Integrals | L | AS |
| H1.4a | Definite Integrals | A | AS |

Module 2 Integration of Standard Functions

| | | |
|--------------|--|---|
| H2.1 | Integration of x^n and e^{kx} | L |
| H2.1a | Integration of x^n and e^{kx} | A |
| H2.2 | Integration of $\sin kx$, $\cos kx$ and $\sec^2 kx$ | L |
| H2.2a | Integration of $\sin kx$, $\cos kx$ and $\sec^2 kx$ | A |

Module 3 Further Integration and Area

| | | |
|--------------|-----------------------------------|---|
| H3.1 | Integration as the limit of a sum | L |
| H3.1a | Integration as the limit of a sum | A |
| H3.2 | Area between two curves | L |
| H3.2a | Area between two curves | A |

Module 4 Methods of Integration

| | | |
|--------------|--|---|
| H4.1 | Integration by Substitution | L |
| H4.1a | Integration by Substitution | A |
| H4.2 | Integration by Parts | L |
| H4.2a | Integration by Parts | A |
| H4.3 | Integration using Partial Fractions | L |
| H4.3a | Integration using Partial Fractions | A |
| H4.4 | Integration using a mixture of methods | L |
| H4.4a | Integration using a mixture of methods | A |

Module 5 Differential Equations

| | | |
|--------------|---|---|
| H5.1 | Construction of Simple Differential Equations | L |
| H5.1a | Construction of Simple Differential Equations | A |
| H5.2 | Solution of 1st Order Differential Equations with Separable Variables | L |
| H5.2a | Solution of 1st Order Differential Equations with Separable Variables | A |
| H5.3 | Use of Differential Equations to solve problems | L |
| H5.3a | Use of Differential Equations to solve problems | A |

Each unit contains at least 1 lecture video and usually 2 or 3 assessments

MATHS – COURSE OUTLINE

SECTION 9 NUMERICAL METHODS

SECTION 10 VECTORS

| | |
|----|--------------------|
| AS | = AS Material ONLY |
| L | = Lecture |
| A | = Assessment |

Module 1 Numerical Solution Methods

| | | |
|--------------|---|---|
| I1.1 | Locating roots through the sign-change search | L |
| I1.1a | Locating roots through the sign-change search | A |
| I1.2 | Simple iterative methods | L |
| I1.2a | Simple iterative methods | A |
| I1.3 | Cobweb and Staircase Diagrams | L |
| I1.3a | Cobweb and Staircase Diagrams | A |
| I1.4 | Newton-Raphson Method | L |
| I1.4a | Newton-Raphson Method | A |

Module 2 Numerical Integration

| | | |
|--------------|--------------------------------------|---|
| I2.1 | Approximating the area under a curve | L |
| I2.1a | Approximating the area under a curve | A |
| I2.2 | Trapezium Rule | L |
| I2.2a | Trapezium Rule | A |

Module 1 Vectors in 2 Dimensions

| | | | |
|--------------|--|---|----|
| J1.1 | Introduction to Vectors | L | AS |
| J1.1a | Introduction to Vectors | A | AS |
| J1.2 | Vector addition and Multiplication by Scalars | L | AS |
| J1.2a | Vector addition and Multiplication by Scalars | A | AS |
| J1.3 | Position Vectors and the Distance between 2 points | L | AS |
| J1.3a | Position Vectors and the Distance between 2 points | A | AS |
| J1.4 | Vector Geometry and the Ratio Theorem | L | AS |
| J1.4a | Vector Geometry and the Ratio Theorem | A | AS |

Module 2 Vectors in 3 Dimensions

| | | |
|--------------|-------------------------|---|
| J2.1 | Vectors in 3 Dimensions | L |
| J2.1a | Vectors in 3 Dimensions | A |

SECTION 11
STATISTICAL SAMPLING

SECTION 12
PRESENTING AND
INTERPRETING DATA

| Module 1 Statistical Sampling | | | |
|----------------------------------|------------------------|---|----|
| K1.1 | Population and Samples | L | AS |
| K1.1a | Population and Samples | A | AS |
| K1.2 | Sampling Techniques | L | AS |
| K1.2a | Sampling Techniques | A | AS |

| Module 1 Diagrams for Single-Variable Data | | | |
|---|---|---|----|
| L1.1 | Frequency Diagrams and Histograms | L | AS |
| L1.1a | Frequency Diagrams and Histograms | A | AS |
| L1.2 | Cumulative Frequency Diagrams and Box + Whisker Plots | L | AS |
| L1.2a | Cumulative Frequency Diagrams and Box + Whisker Plots | A | AS |

| Module 2 Scatter Diagrams, Regression Lines and Correlation | | | |
|--|---------------------------------------|---|----|
| L2.1 | Scatter Diagrams and Regression Lines | L | AS |
| L2.1a | Scatter Diagrams and Regression Lines | A | AS |
| L2.2 | Correlation | L | AS |
| L2.2a | Correlation | A | AS |

| Module 3 Central Tendency and Variation | | | |
|--|-----------------------------------|---|----|
| L3.1 | Measures of Central Tendency | L | AS |
| L3.1a | Measures of Central Tendency | A | AS |
| L3.2 | Measures of Variation | L | AS |
| L3.2a | Measures of Variation | A | AS |
| L3.3 | Calculation of Standard Deviation | L | AS |
| L3.3a | Calculation of Standard Deviation | A | AS |

| Module 4 Interpreting Data | | | |
|-------------------------------|----------------------------|---|----|
| L4.1 | Outliers and Cleaning Data | L | AS |
| L4.1a | Outliers and Cleaning Data | A | AS |
| L4.2 | Statistical Problems | L | AS |
| L4.2a | Statistical Problems | A | AS |

Each unit contains at least 1 lecture video and usually 2 or 3 assessments

MATHS – COURSE OUTLINE

SECTION 13 PROBABILITY

SECTION 14 STATISTICAL DISTRIBUTIONS

| | |
|----|--------------------|
| AS | = AS Material ONLY |
| L | = Lecture |
| A | = Assessment |

Module 1 Calculating Probability

| | | | |
|--------------|---|---|----|
| M1.1 | Mutually Exclusive and Independent Events | L | AS |
| M1.1a | Mutually Exclusive and Independent Events | A | AS |
| M1.2 | Discrete and Continuous Distributions | L | AS |
| M1.2a | Discrete and Continuous Distributions | A | AS |

Module 2 Conditional Probability

| | | | |
|--------------|-------------------------|---|--|
| M2.1 | Conditional Probability | L | |
| M2.1a | Conditional Probability | A | |

Module 3 Modelling with Probability

| | | | |
|--------------|----------------------------|---|--|
| M3.1 | Modelling with Probability | L | |
| M3.1a | Modelling with Probability | A | |

Module 1 Discrete Probability Distributions

| | | | |
|--------------|---|---|----|
| N1.1 | Simple Discrete Probability Distributions | L | AS |
| N1.1a | Simple Discrete Probability Distributions | A | AS |
| N1.2 | The Binomial Distribution | L | AS |
| N1.2a | The Binomial Distribution | A | AS |

Module 2 The Normal Distribution

| | | | |
|--------------|---|---|--|
| N2.1 | Introduction to the Normal Distribution | L | |
| N2.1a | Introduction to the Normal Distribution | A | |
| N2.2 | Use of the Normal Distribution | L | |
| N2.2a | Use of the Normal Distribution | A | |
| N2.3 | Normal Approximation to the Binomial Distribution | L | |
| N2.3a | Normal Approximation to the Binomial Distribution | A | |
| N2.4 | Selection of Probability Distributions | L | |
| N2.4a | Selection of Probability Distributions | A | |

SECTION 15
STATISTICAL
HYPOTHESIS TEST

SECTION 16
QUANTITIES
AND UNITS

Module 1
Binomial Distribution Hypothesis Tests

| | | | |
|--------------|---|---|----|
| O1.1 | Language of Statistical Hypothesis Testing | L | AS |
| O1.1a | Language of Statistical Hypothesis Testing | A | AS |
| O1.2 | Conducting a test for the Proportion in the Binomial Distribution | L | AS |
| O1.2a | Conducting a test for the Proportion in the Binomial Distribution | A | AS |

Module 2
Other Hypothesis Tests

| | | | |
|--------------|--|---|--|
| O2.1 | Test for the mean of a Normal Distribution | L | |
| O2.1a | Test for the mean of a Normal Distribution | A | |
| O2.2 | Test for the Correlation Coefficient | L | |
| O2.2a | Test for the Correlation Coefficient | A | |

Module 1
Quantities and Units

| | | | |
|--------------|--------------------------|---|----|
| P1.1 | Units in the S.I. system | L | AS |
| P1.1a | Units in the S.I. system | A | AS |

Each unit contains at least 1 lecture video and usually 2 or 3 assessments

MATHS – COURSE OUTLINE

SECTION 17 KINEMATICS

SECTION 18 FORCES AND NEWTON'S LAWS

| | |
|----|--------------------|
| AS | = AS Material ONLY |
| L | = Lecture |
| A | = Assessment |

Module 1 Elementary Kinematics

| | | | |
|--------------|--------------------------|---|----|
| Q1.1 | Basic Definitions | L | AS |
| Q1.1a | Basic Definitions | A | AS |
| Q1.2 | Displacement-Time Graphs | L | AS |
| Q1.2a | Displacement-Time Graphs | A | AS |
| Q1.3 | Velocity-Time Graphs | L | AS |
| Q1.3a | Velocity-Time Graphs | A | AS |

Module 2 Constant Acceleration Formulae

| | | | |
|--------------|--------------------------------|---|----|
| Q2.1 | Derivation and Use of Formulae | L | AS |
| Q2.1a | Derivation and Use of Formulae | A | AS |
| Q2.2 | Extension to 2 Dimensions | L | |
| Q2.2a | Extension to 2 Dimensions | A | |

Module 3 Use of Calculus in Kinematics

| | | | |
|--------------|---------------------------|---|----|
| Q3.1 | Motion in a Straight Line | L | AS |
| Q3.1a | Motion in a Straight Line | A | AS |
| Q3.2 | Extension to 2 Dimensions | L | |
| Q3.2a | Extension to 2 Dimensions | A | |

Module 4 Motion under Gravity

| | | | |
|--------------|-------------------------------|---|--|
| Q4.1 | Vertical Motion under Gravity | L | |
| Q4.1a | Vertical Motion under Gravity | A | |
| Q4.2 | Projectiles | L | |
| Q4.2a | Projectiles | A | |

Module 1 Newton's Laws

| | | | |
|--------------|--|---|----|
| R1.1 | Newton's 1st Law | L | AS |
| R1.1a | Newton's 1st Law | A | AS |
| R1.2 | Newton's 2nd Law for Motion in a Straight Line | L | AS |
| R1.2a | Newton's 2nd Law for Motion in a Straight Line | A | AS |
| R1.3 | Weight and Motion under Gravity | L | AS |
| R1.3a | Weight and Motion under Gravity | A | AS |
| R1.4 | Newton's 3rd Law | L | AS |
| R1.4a | Newton's 3rd Law | A | AS |
| R1.5 | Connected Particles Problems | L | AS |
| R1.5a | Connected Particles Problems | A | AS |

Module 2 Resolution of Forces

| | | | |
|--------------|---|---|--|
| R2.1 | Resolving Forces in 2 Dimensions | L | |
| R2.1a | Resolving Forces in 2 Dimensions | A | |
| R2.2 | Particle Moving on an Inclined Plane | L | |
| R2.2a | Particle Moving on an Inclined Plane | A | |
| R2.3 | Equilibrium of a particle under coplanar forces | L | |
| R2.3a | Equilibrium of a particle under coplanar forces | A | |
| N2.4 | Selection of Probability Distributions | L | |
| N2.4a | Selection of Probability Distributions | A | |

Module 3 Resultant Forces

| | | | |
|--------------|--------------------------------|---|--|
| R3.1 | Addition of Forces | L | |
| R3.1a | Addition of Forces | A | |
| R3.2 | Dynamics for Motion in a plane | L | |
| R3.2a | Dynamics for Motion in a plane | A | |

Module 4 Friction

| | | | |
|--------------|-------------------------------------|---|--|
| R4.1 | Coefficient of Friction | L | |
| R4.1a | Coefficient of Friction | A | |
| R4.2 | Motion of a body on a rough surface | L | |
| R4.2a | Motion of a body on a rough surface | A | |
| R4.3 | Limiting Friction and Statics | L | |
| R4.3a | Limiting Friction and Statics | A | |

SECTION 19

MOMENTS

| Module 1 Moments | | |
|---------------------|--|---|
| S1.1 | Introduction to Moments | L |
| S1.1a | Introduction to Moments | A |
| S1.2 | Equilibrium of Rigid Bodies | L |
| S1.2a | Equilibrium of Rigid Bodies | A |
| S1.3 | Problems involving parallel and non-parallel coplanar forces | L |
| S1.3a | Problems involving parallel and non-parallel coplanar forces | A |

Each unit contains at least 1 lecture video and usually 2 or 3 assessments

ABOUT US

With a wealth of real-life teaching experience, the EzyMaths team are passionate about helping teachers improve student grades through the use of technology.



PETER JORDAN

Peter Jordan founded EzyEducation after becoming frustrated at the lack of meaningful digital learning aids available whilst teaching economics at The Portsmouth Grammar School. Before entering the classroom, Peter had several senior marketing roles within the financial services sector, including at Old Mutual Wealth and Scottish Widows.



MATT HAWES

Matt Hawes is the EzyMaths course leader. Matt has over 10 years' experience teaching maths in both the state and independent sectors and was a keen advocate of the flipped classroom model. His teaching and flipped learning experience have been incorporated into the EzyMaths course.

DR MICHAEL McCALL

Dr Michael McCall has a wealth of academic and teaching experience, having read mathematics at Cambridge University, received a PhD from the University of Durham and then spent his subsequent career teaching Maths. Michael spent over 15 years as the head of maths at The Portsmouth Grammar School and oversees the development of the EzyMaths resources.

Our excellent support team are on-hand to support you and will make setting up and using EzyMaths a breeze.

Email us at info@ezyeducation.co.uk or give us a call on 01329 285415.

EZY EDUCATION

EZYEDUCATION LTD,
UNIT 7, DARTMOUTH BUILDINGS,
FORT FAREHAM BUSINESS ESTATE,
NEWGATE LANE, FAREHAM, PO14 1AH
TEL: 01329 285 415
info@ezyeducation.co.uk
www.ezyeducation.co.uk