MATHEMATICS

WJEC A LEVEL

Mathematics underpins our understanding of everyday life in nature, science, engineering and finance. The course aims to provide the skills necessary to communicate and problem-solve using mathematics. The programme of study includes pure mathematics, mechanics, statistics, differential equations and numerical methods.

The Course Involves:

Year One:
AS Unit 1

- **Pure Mathematics** - including Proof, Algebra and Functions, Coordinate Geometry, Sequences and Series, Trigonometry, Exponentials and Logarithms, Differentiation, Integration and Vectors.

AS Unit 2

- **Applied Mathematics** - including Statistical Sampling, Data Presentations and Interpretation, Probability, Statistical Distributions, Hypothesis Testing, Quantities and Units in Mechanics, Kinematics, Forces and Newton's Laws and Vectors.

Year Two:
A Level Unit 3

- **Pure Mathematics** - including Proof, Algebra and Functions, Coordinate Geometry, Sequence and Series, Trigonometry, Differentiation and Integration.

A Level Unit 4

- **Applied Mathematics** - including Probability, Statistical Distributions, Statistical Hypothesis Testing, Trigonometry, Differentiation, Integration, Numerical Methods, Kinematics, Forces and Newton's Laws, Moments and Vectors.

Assessment

- **Unit 1** - Written Paper - 25% A Level, 62.5% AS
- **Unit 2** - Written Paper - 15% A Level, 37.5% AS
- **Unit 3** - Written Paper - 35% A Level
- **Unit 4** - Written Paper - 25% A Level

Particular Subjects, Skills or Interests

Students will normally require grade A/7 or above at GCSE Mathematics. Your algebraic skills will be important.

Post-18 Opportunities

Maths A Level supports degree studies in: Physics, Engineering, Actuarial Science, Economics and Maths. For some courses students may be required to study a **Further Maths** course as well. Maths is also useful for studies in Computer Science, Accounting, Chemistry, Biology & Life Sciences, Medicine/Nursing, Dentistry, Business Studies, Management Studies, Finance, Architecture, Geology, Psychology, Surveying and Philosophy. Maths is also desirable if entering employment or starting an apprenticeship.

Subject Leader: Mr A Bright

Subject Champions

2020/21

Matthew Wright
Studying: Maths, Physics, Biology, Chemistry & Welsh Baccalaureate.
Future aspirations: to study biochemistry at university.

Wiktoria Milczanowska
Studying: Maths, Biology, Chemistry & Welsh Baccalaureate.
Future aspirations: to study medicine at university.

"Maths is a challenging yet rewarding subject, whose large interface with Medicine makes it a valuable subject to study. The sense of satisfaction gained in solving complex problems makes it worth the hard work. This is helped by small teaching classes which provide personalised learning, as well as compassionate staff."