| A Level Further Maths                          |   |  |  |
|--|---|--|--|
| Exam board & Specification Number Edexcel 9FM0 |   |  |  |
| Qualification Accreditation Number (QAN)       | litation Number (QAN) 6031/1449/0       |  |  |
| Link to Course Details Webpage                 | Click Here                              |  |  |
| Duration, Delivery and Study Mode              | Two Years Full Time Day Time Study      |  |  |
| Start Date (not flexible) and Campus           | 01 September from Stanley Avenue Campus |  |  |

### Course Details: Who is this Course for?

This course is for students progressing from GCSE into Level 3 (A Level or Equivalent) studies, with a view to study this subject or related subjects at degree level.

### **Course Details: What Will You Learn?**

| Year I | Unit I – Core Pure Mathematics Topics that you will study include: Proof, Complex numbers and                    |  |
|--------|--|--|
|        | Argand diagrams, Matrices, Further algebra and functions, Further calculus, and Further vectors.                 |  |
|        | Unit 2 – Options 2B (Further Pure Mathematics I and Further Decision I) Students will study                      |  |
|        | Coordinate systems, inequalities Vectors , Conic Section I, Methods in Calculus , Numerical Methods and          |  |
|        | Inequalities in FPI and Algorithms, Graphs and Networks, Route Inspections, Linear Programming and               |  |
|        | Critical path Analysis in D1.  |  |
| Year 2 | Unit I: Core Pure Mathematics I: As well as revision of Year I topics, other topics you will study               |  |
|        | include: Further Complex Numbers, Series, Methods in Calculus, Volume of Revolutions, Polar                      |  |
|        | Coordinates, Hyperbolic Functions, Methods in differential equations, and Modelling with differential equations. |  |
|        | Unit 2: Core Pure Mathematics 2: As well as revision of Year 1 topics, other topics you will study               |  |
|        | include: Further Complex Numbers, Series, Methods in Calculus, Volume of Revolutions, Polar                      |  |
|        | Coordinates, Hyperbolic Functions, Methods in differential equations, and Modelling with differential equations. |  |
|        | Unit 3: Further Pure Mathematics I: As well as revision of Year I topics, other topics you will study            |  |
|        | include: Further conics, Taylor Series, further calculus,, Methods in differential equations, Polar              |  |
|        | coordinates and reducible differential equations.  |  |
|        | Unit 4: Further Decision I: As well as revision of Year I topics, other topics you will study include:           |  |
|        | Simplex Algorithm and The Travelling Salesman  |  |

### Course Details: How will you be Assessed?

These are the Unit Codes and their percentage weighting at A- Level:

| Paper 1: 9FMO/01 [25%] | Assessed by a 1.5 hour public examination in the Summer Term. |
|------------------------|---|
| Paper 2: 9FMO/02 [25%] | Assessed by a 1.5 hour public examination in the Summer Term  |
| Paper 3: 9FMO/3A [25%] | Assessed by a 1.5 hour public examination in the Summer Term  |
| Paper 3: 9FMO/3D [25%] | Assessed by a 1.5 hour public examination in the Summer Term  |

### Course Details: Entry Requirements

Please see our <u>webpage</u> for details of our course entry requirements.

Students must achieve a D grade or higher at the end of Year 12 in order to progress into Year 2 of this course.

# Progression Information and Useful Links on Page 2

# **Additional Course Information**

### Course Details: How will you Learn?

Delivery Mode:

- Classroom based teaching
- □ Flipped Learning (independent learning)

# Course Details: Equipment / Materials you will need

- Scientific Calculator
- □ Graph Paper, Writing Paper, Pencils and Pens
- □ Maths Sets including Ruler, Compass, Protractor
- All other equipment will be provided to you by the school

#### How can I prepare for and explore this course further?

- Glossary of Technical Terminology
- Recommended Text Books
- Past Exam Papers
- Related Articles
- UIP Zone

# Careers & Progression (Where Next)?

Career ideas and Progression route:

Level 3 qualifications in Further Mathematics will enable students to enter degree courses related to engineering, data analysis, architecture and computing.

Click here for information on Careers in Mathematics