



## FURTHER MATHS AS/A LEVEL

### **Awarding Body** **EDEXCEL**

### **Who is the course for?**

This course is for students who want to study mathematics at a higher level. Students will understand in both pure and applied mathematics. This A-level can be combined with many other A-levels but most commonly with the sciences, business studies, economics and ICT.

### **What can it lead to?**

This is a subject which is highly regarded for most university courses as it shows the ability to solve problems and work with data. The course can be used as a stepping stone to studying mathematics, physics or engineering at degree level or to count as one of the 'sciences' when applying for a degree in medicine.

### **What are the entry requirements?**

The minimum requirements are 5A\* to C GCSE grades including mathematics and English.

A or A\* grade in GCSE mathematics is essential.

Entered for AS/A level mathematics.

### **What will I Study?**

Further pure mathematics and applied mathematics (including statistics and mechanics)

### **How will I be taught?**

You will be taught for an additional 4-6 lessons a week, on top of the usual 6 lessons of mathematics a week. Homework will be set once or twice a week and you should spend at least 4 hours per week on homework and background reading tasks.

### **What equipment or materials will I need?**

Students are expected to purchase all textbooks and note paper and should bring a scientific calculator, ruler, pencil, compasses and pen to all lessons.

### **How will I be assessed?**

#### **3 modules make up an AS level**

#### **3 further modules are taken for A2**

**(3 modules = AS level; 6 modules = A level)**

### **AS units studied**

All students take FP1 and 2 additional modules, usually S1 and M2.

### **A2 units studied**

All students take FP2 and 2 additional modules.

### **Further pure 1**

- Complex numbers
- Numerical solutions
- Coordinate systems
- Matrix algebra
- Series
- Proof by mathematical induction

### **Statistics 1**

- Representations of sample data
- Methods for summarising & sampling data
- Probability
- Correlation
- Regression
- Discrete random Variables
- The Normal distribution

### **Mechanics 2**

- Kinematics of a particle moving in a straight line or plane
- Centres of mass
- Work, energy and power
- Collisions
- Statistics of rigid bodies