

PHYSICS



WHY STUDY A-LEVEL PHYSICS?

An A-Level in physics shows that you are able to apply your mind logically when solving problems. The world of engineering, science, medicine and many non-scientific careers beckon budding scientists. Physics will help you develop a flexible portfolio of skills that will equip you for a satisfying career wherever your ambitions lie.

WHAT QUALIFICATIONS ARE NEEDED?

It is not essential to study A-Level Mathematics. However, a high level of numeracy is required and demands that students have a sound knowledge of basic Maths.

EDEXCEL A-Level Physics May/June 2020 - The A-level exam consists of 3 externally assessed exams

Paper 1- Advanced Physics I -

- Assessment is 1 hour 45 minutes.
- The paper consists of 90 marks.
- **Contributes 30% to overall qualification**
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This paper will examine the following topics:

Working as a Physicist; Mechanics; Electric Circuits; Further Mechanics; Electric and Magnetic Fields; Nuclear and Particle Physics.

The paper may include multiple-choice, short open, open-response, calculations and extended writing questions. Students will be expected to apply their knowledge and understanding to familiar and unfamiliar contexts.

Paper 2- Advanced Physics II -

- Assessment is 1 hour 45 minutes.
- The paper consists of 90 marks.
- **Contributes 30% to overall qualification**

This paper will examine the following topics:

Working as a Physicist; Materials; Waves and Particle Nature of Light; Thermodynamics; Space ;Nuclear Radiation; Gravitational Fields; Oscillations

- A minimum of 40% of the marks across the three papers will be awarded for mathematical calculations
- Students will be expected to apply knowledge and understanding to familiar and unfamiliar contexts

- The paper will include questions that assess conceptual and theoretical understanding of experimental methods (indirect practical skills) that will draw on students' experiences of the core practicals.

Paper 3- General and Practical Principles in Physics -

- Assessment is 2 hours 30 minutes.
- The paper consists of 120 marks.
- Contributes 40% to overall qualification
- Questions in this paper may draw on any of the topics in this specification.
- The paper will include synoptic questions that may draw on two or more different topics.
- The paper includes questions that assess conceptual and theoretical understanding of experimental methods.
- **A minimum of 40% of the marks across the three papers will target mathematical skills**

SCIENCE PRACTICAL ENDORSEMENT

Internally assessed and externally moderated.

Students use relevant apparatus and techniques to develop and demonstrate specific practical skills assessed through a minimum of 12 core practicals.

Students will be assessed separately for the Science Practical Endorsement. The Endorsement will not contribute to the overall grade for this qualification, but the result will be recorded on the student's certificate.

You will become a member of a friendly Physics Department, which delivers excellent results. You will acquire the skill of organising your study time efficiently. Each hour in class is backed up by an hour of private study comprising of problem solving, practical write-ups and background reading. During the course you will be expected to attend outside lectures and courses. We trust that studying Physics in St. Michael's will be a rewarding experience. You will be following in the footsteps of many students who today are successful medics, lawyers, engineers, city financiers, architects and CERN particle physicists.

“Whatever you want to be in life, Physics will help you achieve it”

