PHYSICS

SIXTH FORM

COURSE TITLE

A Level Physics

Exam Board: OCR

AIMS OF THE COURSE

To stimulate and sustain interest and enjoyment in Physics. To show the students how Physics can be used in industrial and business situations, such as mechanical, electrical, civil and aerospace engineering, medical imaging, astrophysics, particle and nuclear physics components.

WHAT WILL YOU STUDY?

There is a good balance between the descriptive and mathematical components of mechanics, electricity, waves and particle physics at A Level. These areas are built upon within the second year and, in addition, students study thermal physics and gases, electric and magnetic fields, astrophysics, nuclear physics and medical imaging to a standard allowing them access to the most demanding University courses.

The mathematical content of the course is Level 2 in challenge and builds up as the course progresses. In Year 13 study is suitable for those interested in theoretical and practical aspects of physics and engineering.

HOW WILL YOU BE ASSESSED?

Three exam papers at the end of Year 13 as follows:

Paper 1 - Modelling Physics (Mechanics, Materials, Astrophysics, Thermal Physics and gases)

Paper 2 - Exploring Physics (Electricity, Waves, Photons, Nuclear and particle physics, medical imaging)

Paper 3 - Unified Physics (Synoptic application of all aspects of the course)

You will also undertake a practical endorsement over the two years focussed on practical apparatus and techniques linked to the course.

WHAT WIDER SKILLS WILL YOU DEVELOP?

There is a focus within the course on application and analysis of information, linking scientific concepts to unfamiliar scenarios. You will focus to a large extent on your practical skills, interpreting data and drawing conclusions from your results.

WHAT ARE THE FUTURE OPTIONS FROM THE COURSE?

Physics is an important foundation science. The recent discoveries in Particle physics and astrophysics together with advances in engineering and aerospace will undoubtedly create increased opportunity for Physicists with interests in these areas. Areas where Physics is considered mandatory/useful by University Tutors are: Medicine (particularly in medical imaging), Law, Materials sciences, Business and Economics, Quantitative finance, Computer sciences, Engineering (Mechanical, Civil, Chemical or Aerospace).