

Subject: Physics	Awarding Body: AQA
Head of Dept: Mr Murray-Smith	Teacher: Mr Sandford

Preferred entry requirements:

Grade 6 or above in GCSE Physics or a grade 6-6 in GCSE Combined Science (with a component breakdown favouring Physics). A grade 6 in GCSE Mathematics is also a pre-requisite. Exceptional circumstances are always considered.

Specification Content

A level Year 1		Year 2	
1	Measurements and their errors	6	Further mechanics and thermal physics
2	Particles and radiation	7	Fields and their consequences
3	Waves	8	Nuclear physics
4	Mechanics and materials	9	Optional section (see below)
5	Electricity		

Structure of the course:

The A level qualification will involve the study of eight sections as outlined above and an optional section (with a choice from: astrophysics, medical physics, turning points in physics, engineering physics, applied physics and electronics). Sections 1-5 will be assessed during a two-hour written paper, which will include short and long answer and multiple choice questions. Sections 6-8 will also be assessed in a two-hour written paper with short and long answer and multiple choice questions. The third paper will assess practical skills and data analysis with short and long answer questions followed by short and long answer questions on the optional section. In Year 1 the course builds upon the skills and knowledge acquired at GCSE as well as introducing new topics, such as particle physics. Teacher assessed practical skills and 12 required practical activities are incorporated into the two year course and lead to a practical endorsement.

Method:

Teaching is well structured to allow students to further develop ideas met at GCSE Physics. Students will be expected to work collaboratively and independently by tackling questions and carrying out practical tasks. The nature of the course requires some independent research with much independent study and learning. There are more calculations at this level than previously at GCSE, and these need to be practised regularly if they are to be mastered. None of the numerical skills at A Level require any methodology beyond GCSE Higher Tier Mathematics.

Strengths/Skills developed through studying this subject:

The course involves knowledge, understanding, application and evaluation. These are skills that will be developed through the units and through experimental and investigative work. The ability to communicate in a clear, accurate, logical and coherent manner and to use appropriate vocabulary will also be developed. Numeracy skills will also be further developed in a contextual manner.

What students do with this qualification:

Employers recognise physicists as people of intelligence and ability. Increasingly, companies are looking for physicists for entry into a wide range of disciplines. Physics is required for entry into all engineering based courses and often medicine, dentistry and physiotherapy. Pure physics leads invariably to research where new theories and new products are developed and is a fascinating and rewarding career. Applied physics can also lead to a vast spectrum of interesting fields: environment, space, transport, computing, medicine, economics and finance. Moreover, many A level students have found that Physics increases their university options beyond the obvious scientific choices. UK Physics graduates are in demand worldwide, and especially in the USA.