



Electronics

One year AS/Two year A level.

Through mobile phone networks, digital communication, optical fibres, radio waves and computer technology the world is increasingly connected by electronics. This course provides students with both a practical and a theoretical knowledge of the components commonly used in modern electronic systems.

Requirements:

The College minimum to start an advanced level course is one grade B and four grade Cs at GCSE. Students wishing to undertake this course require a minimum of grade B in GCSE Mathematics (a grade C may be considered in exceptional circumstances), grade C in GCSE English Language and CC in GCSE Double Science or C in GCSE Physics. The student will also be expected to meet the Average Points Score for this subject. Students with the minimum qualifications may be asked to complete an additional aptitude test.

This subject will focus on:

- the relationships between electrical current, voltage, resistance and power;
- common components such as diodes, light dependent resistors, thermistors and transistors;
- how operational amplifiers function in different circuits;
- the uses of 555 timer circuits;
- the building blocks of digital electronics such as logic circuits and counters;
- programmable systems and interfacing to sensors and output devices; and
- how radio and mobile phone communications function.

You can expect to:

- design, construct and test electronic circuits;
- produce written reports describing the circuits you have made; and
- calculate, using mathematical formulae, the values of the components your circuit will need.

Method of assessment:

Assessment is by examination and coursework.

Progression:

Many students take AS or A Level Electronics to find out more about how electronic circuits work. Students wishing to progress to a degree in Electronics or Electronic Engineering also require A Level Mathematics.

Student Success at Havering Sixth Form College:

Ashik Oommen (ex Royal Liberty) said: "I chose Electronics because I have always been interested in gadgets and technological advances. It will also help me with my university course, as avionics is a big part of Aerospace Engineering. The practical project was the

most enjoyable part of the course." Ashik hopes to study Aerospace Engineering at Queen Mary, University of London.

Electronics had a 100% pass rate at A Level in 2009.