Electronics A Level

O.C.R Advanced Subsidiary (AS) | Advanced Level (AS)
Teachers: Lynn Stott, Sean Lyttle
Head of Science Department: Jonathan Newell

You should do this course if……

You have recognised the importance of Electronics in the modern world and would like some idea of how it works.
You enjoy a practical problem solving approach to your learning.
You would like to be able to build a working system at the end of your A-level course.
You want to develop the knowledge and skills that will serve as a foundation for more

Skills you will develop on this course:
Youwill develop knowledge and understanding of the principles of Electronics.
You will acquire a body of knowledge which will serve as a foundation for more advanced studies in Electronics.
You will develop the practical skills associated with the design, construction and testing of electronic systems.

AS Units

1 Simple Systems
Fundamentals of modern Electronics.
2 Signal Processors
Systems which change or store signals both digital and analogue.
3 Coursework
Build and Investigate circuits from previous units.

A2 Units

4 Control Systems
Systems to control larger systems e.g. robotic movement or physical conditions e.g. temperature
5 Communication Systems
Streams of digital information can be converted into moving pictures.
Transmission and decoding of radio signals.
6 Design, Build & Investigate a Project
Students design, build and test a circuit of their own choosing.

Electronics
A Level

How will you learn?

Half of the course is practical, which is used to demonstrate the theory and to teach the skills needed for Electronics.

Practical work takes the form of problem solving and the results of are used to develop theories and explanations of how Electronics works.Some ideas are taught by computer simulations.

Weekly homework will consist of graded questions leading finally to questions of examination level.

Where does the course lead?

A level Electronics prepares students for a wide range of degree courses in Engineering, Computing and Design. It also provides a sound background for those wishing to join industry or take an apprenticeship in this area. Electronics is desirable for those who wish to study Music Technology, Product Design or IT at a higher level.

Assessment and Exams.

Unit 1 Written exam: 1 hr 30 mins. This paper consists of short answer questions, calculations and extended written answers
Unit 2 1 hr 30 mins
Format as for the unit 1 test
Unit 3 Three short practical tasks - about 5 hours of laboratory time each

Unit 4 & Unit 5: 1 hr 30 mins each
Format as for the unit 1 test.
There is a **synoptic** element to these tests.

Unit 6 Approx. 15 hours of coursework in the laboratory - internally marked. Students build a circuit and produce a report.

Entry Requirements.

5C's at GCSE which should include maths and science.
****You do not need to have studied GCSE electronic but you should start with a grounding in basic electronics.****