SIXTH FORM

Electronics

AQA
AS 1431/A2 2431

WHY CHOOSE ELECTRONICS?

Electronics influences all aspects of our daily lives, from the alarm clock that wakes us to the TV or radio we turn on in the morning. Our journey to school and work is monitored by electronic traffic lights and CCTV to ensure our safety.

Entertainment has evolved with the advances in, and the miniaturisation of, electronics in the last 10 years to such an extent that yesterday's science fiction has become today's reality.

AS/A2 Electronics is an ideal course to study, having successfully studied GCSE Systems & Control and GCSE Science. Students at Imberhorne will study the AQA AS/A2 Electronics course 1431/ 2431.

HOW USEFUL WILL IT BE?

Electronics is referred to in AS/A2 Level Physics and Computing. It is combined with all major engineering and science disciplines at university. Universities are currently recognising A Level Electronics as a "science of engineering" or "scientific biased" subject.

The knowledge and skills acquired through the study of electronics form a sound base, not only for taking the subject further, but also for employment in the scientific and technological professions. In addition, in studying this subject students will encounter techniques and disciplines of value in many other subject areas.

WHAT WILL YOU NEED TO DO TO BE SUCCESSFUL?

To study this subject you will need a minimum of five GCSE subjects at Grade A*-C. Interest and enthusiasm to learn this enjoyable subject and the commitment and ability to work hard and to meet deadlines are essential.

As with AS/A2 Level Sciences, students should have gained B grades or above in GCSE Science and Mathematics as the skills acquired in these are transferable to Electronics. Previous experience of the study of electronics is not a pre-requisite.

WHAT WILL YOU STUDY ON THE COURSE IN YEAR 12 – THE AS LEVEL

You will study the following three modules on the AS course:

Unit 1: Introductory Electronics – designing systems, electronic components including sensors, transistors, logic gates and output devices.

Unit 2: Further Electronics – logic systems, timing, counters, amplifiers and filters.

Unit 3: Practical System Development - Coursework project based on the theory in Units 1 and 2.

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HOW IS THE AS LEVEL ASSESSED?

The first two components are 1 hour external examinations – these are sat in June of Year 12. The third component is an internally assessed project, which accounts for 30% of the final award.

WHAT WILL YOU STUDY ON THE COURSE IN YEAR 13 – THE A2 LEVEL?

You will study a further three modules in Year 13:

Unit 4: Programmable Control Systems – PIC programming, microprocessor control and interfacing.

Unit 5: Communications Systems – principles of radio, digital and mobile communication and optoelectronics.

Unit 6: Practical System Synthesis – coursework based on the theory in Units 5 and 6.

HOW IS A2 LEVEL ASSESSED?

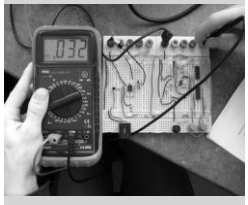
Units 4 and 5 are assessed in external examinations of 1½ hours each and the coursework project is assessed internally, as with the AS level. It accounts for 15% of the marks for the A2 award.

HOW MUCH TIME WILL YOU HAVE TO SPEND ON PRIVATE STUDY/RESEARCH?

In addition to your timetabled lessons:

AS Level: at least 4 hours per week.

A2 Level: at least 5 hours per week.



For further information please contact: Mr J. Turner