



Electronics

Why study Electronics?

Electronics will give you the opportunity to design and build a wide variety of circuits. You will combine different components and microcontrollers to solve highly complex problems. As an Electronics student you will have not only an in-depth understanding of electronics, programming and digital communications but also practical skills.

What skills will I gain from studying Electronics?

Electronics will give you the ability not only to design and build a huge variety of electronic circuits, but the skills required to spot mistakes in a complex build and evaluate the suitability of a circuit to solve a problem. As an Electronics student you will be able to breakdown a complex problem into manageable tasks and apply your understanding to find creative ways to solve complex problems.

Having studied Electronics what opportunities will be open to me?

Electronics students have fantastic problem solving skills and are also able to take complex circuits and make them work. As such you will have a wealth of transferable skills that link to any Engineering or Science Degree or Apprenticeship. As an Electronics student you will have developed your programming skills, mathematical skills and have a detailed understanding of the physics of electronic circuitry. All of which are readily transferable skills required in a wide variety of career paths.

Entry requirements Grade 5 in Physics or 65 in Combined Science and a grade 5 in Maths.

Exam Board – WJEC

Specification code/no. - 603/0777/8

Topics covered in Year 12

Semiconductor components, Logic systems, Operational amplifiers, Timing circuits, Sequential logic systems, Microcontrollers, Mains power supply systems, High power switching systems and Audio systems

Topics covered in Year 13

Signal conversion, AC circuits and passive filters, Communications systems, Wireless transmission and Instrumentation systems, Digital communications and Optical communication.