

Subject: Electronics



GCSE Course Followed: Electronics

Specification: [WJEC \(Syllabus code C490\)](#)

Why Choose GCSE Electronics?

This course provides students with the opportunity to develop scientific and mathematical knowledge, engineering skills and the ability to tackle problems in a pure electronics context. GCSE Electronics is studied in such a way as to develop and maintain an interest in Systems and Electronic Engineering and the appreciation of its relevance in everyday life. The practical work enables learners to see the theoretical knowledge contained in the specification in action and to gain greater understanding of the knowledge in a practical context. Electronics students develop and test components and systems using advanced level test equipment to solve problems in the real world. We are fortunate to have a dedicated Electronics lab that allow our specialist staff to deliver a course that prepares students well for a future career in any technical discipline.

For boys there is a video promotion for Electronics at AGSB on SharePoint and can be found [here](#).

The course is divided as follows:

Component 1: Discovering Electronics. 1 hour 30 min.

This examination is worth 40% and is a mix of short answer questions, structured questions and extended writing questions, with some set in a practical context.

Component 2: Application of Electronics. 1 hour 30 min.

This examination is also worth 40% and is a mix of short answer questions, structured questions and extended writing questions, with some set in a practical context.

Component 3: Coursework—Extended System Design—20% of the marks

This is a practical task to assess skills in design, development and testing. Completed at the end of the course in the final term of year 11.

Key Stage Four Curriculum Overview

Year 10

	Name of topic	Key Content of the Topic	Assessment points
HT 1	A tasks B tasks	Systems and building circuits, individual common components Input process blocks and signals	End of topic tests Multiple tasks throughout the topic
HT 2	C tasks	Semiconductors, Capacitors and Diode circuits. Output components	End of topic tests Multiple tasks throughout the topic
HT 3	D tasks	Transistors and combining circuit blocks	End of topic tests Multiple tasks throughout the topic
HT 4	E tasks	Timer circuits	End of topic tests Multiple tasks throughout the topic
HT 5	F tasks	Logic and Boolean operators	End of topic tests Multiple tasks throughout the topic Trial Exam
HT 6	G tasks H tasks	Amplifiers Interfacing	End of topic tests Multiple tasks throughout the topic

Year 11

	Name of topic	Key Content of the Topic	Assessment points
HT 1	I tasks	Sequential systems and counting	End of topic tests Multiple tasks throughout the topic
HT 2	J tasks Revision for exam	Programmable systems Revision topics based upon assessments and pupil request	End of topic tests Multiple tasks throughout the topic Mock Exam
HT 3	NEA	20hr NEA task	NEA portfolio
HT 4	NEA	20hr NEA task	NEA portfolio
HT 5	revision	Revision topics based upon assessments and pupil request	Revision tests (MS forms)
HT 6	NA		GCSE exams

Recommended Revision Guides for GCSE

Mr Smith's notes cover the course and show what tasks are to be completed in order. Each topic is broken up into small individual sections to teach the theory and practical. Each topic has an introduction / description and a test at the end. Simulation software is available on SharePoint to allow students to build and simulate their work and to aid their own learning. There are also multiple websites showing theory and practical simulation materials.

You can visit the website and access a free e-book [here](#) where each chapter provides a detailed set of notes.

Support available for GCSE Students

Lunchtime sessions are available in T1 for pupils studying electronics – the simulation software is a free download from SharePoint with alternatives for those using the Mac operating system.

There are also multiple videos of the tasks available on office365 for those who need a variety of support methods