

COMPUTER SCIENCE GCSE

GCSE Computer Science

When Delivered: One afternoon per week
Qualification title: GCSE Computer Science
Awarding Body: WJEC

Introduction to the subject

Nationally there is a shortage of students applying for Higher Education and Employment in Computer Science and related areas. This is a two year course designed to provide a foundation for the technical skills such as programming required in this fundamental area of technology.

Course Content

Learners will follow a GCSE in Computer Science. This includes 3 units:

- **Unit 1 – Understanding Computer Science**
This unit covers the body of knowledge about computer systems on which the examination will be based. Topics include Hardware, Logical operations, Communication, Organisation and structure of data, System software, Principles of programming, Software engineering, Program construction, Security and data management and Ethical, legal and environmental impacts of digital technology on the wider society.
- **Unit 2 – Computational Thinking and Programming**
This assessment consists of a series of tasks set and marked by WJEC and completed on screen by candidates. These tasks will assess the practical application of knowledge and understanding with a focus on Problem solving, Algorithms and programming constructs, Programming languages, Data structures and data types and Security and authentication.
- **Unit 3 – Software Development**
This controlled assessment will give candidates the opportunity to develop a piece of work using programming software following a task brief issued by WJEC.

Resources

Software:

Python (free download from <https://www.python.org/>).

Greenfoot which is a visual and interactive object oriented environment using Java (free download from <http://www.greenfoot.org/download>)

Learners are expected to have access to a computer at home with Microsoft Windows installed and an internet connection.

Assessment

GCSE Computer Science: Written examination 1 hour 45 minutes (50%), an on-screen examination 2 hours (30%) and a programming controlled assessment 20 hours (20%).