

COMPUTER SCIENCE

Exam board: OCR

Assessment method: Units 1 and 2 are written exams (2 hours 30 minutes each), Unit 3 is a piece of written coursework.

Homework:

Weekly homeworks will be set that are designed to:

Develop students' skills in the Python programming language

Enhance students' knowledge and understanding of key computer science concepts

Encourage students to research new and emerging technologies and question their value and impact on individuals, society and the environment

Course Content:

The course is split into three units:

Unit 1: Computer Systems (40%)

Unit 2: Algorithms and programming (40%)

Unit 3: Programming project (20%)

Unit 1

Learners study the following:

The characteristics of contemporary processors, input, output and storage devices

Software and software development

Exchanging data

Data types, data structures and algorithms

Legal, moral, cultural and ethical issues

Unit 2

Learners study the following:

Elements of computational thinking

Problem solving and programming

Algorithms to solve problems and standard algorithms

Unit 3

Learners choose a computing problem and program a solution using a suitable high-level language. They then produce a report that includes:

An analysis of the problem

A design of the solution

Evidence of developing the solution

An evaluation

Programming languages covered in A-Level Computer Science include Python, HTML, CSS, JavaScript, PHP and SQL.

Overlap with other subjects:

IT, Mathematics, Business Studies, Economics.