

# Computing A Level

**AQA Advanced Subsidiary (AS) | Advanced Level (A2)**  
**Head of Computing Department – Hannah Robertson**

## You should do this course if...

You are interested in how a computer works.

Do you know how the Internet can be used to generate, store and send information anywhere in the world?

Are you aware of the implications associated with the use of computer systems?

You will be able to investigate such issues on this course through theoretical analysis and hands-on practical work.

If you want to learn to program, then Computing is the course for you.

Programming is the main difference between the Computing and ICT courses.

## Skills you will develop on this course

In-depth knowledge of the internal components of modern computers so appropriate choices can be made;

Research skills;

Software design skills;

Software programming skills;

Problem solving skills;

Examination skills

## Topics studied

### **COMP1 - (AS)**

Problem Solving, Programming, Data Representation and Practical Exercise.

This unit covers:

- Programming and the fundamentals of structured programming.
- The binary number system.
- The stages of development of a hardware/software system.

### **COMP2 - (AS)**

Computer Components, the Stored Program Concept and the Internet.

This unit will cover:

- The internal components of a computer.
- The fundamentals of computer systems.
- The structure of the internet and networking protocols.

### **COMP3 – (A2)**

Problem Solving, Programming, Operating Systems, Databases and Networking.

This unit covers:

- Problem solving and algorithmic complexity
- Object oriented programming techniques
- Database design.

### **COMP4 – (A2)**

The Practical Project

The student will learn to document the design of a software solution based on a 'real world' problem and then build the software to meet the specification.

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## How will you learn?

Highlighting handouts; taking notes from presentations, textbooks and video; group research and presentations; using past A Level question papers;

Library and Internet research; discussion; debate; reading Computing magazines; exercises / questions set by your teacher; re-reading notes taken in class.

Extensive development of software problem solving challenges designed specifically to build programming skills and confidence

## Where does the course lead?

A Level Computing prepares students for subjects like IT, Computer Science and the full range of software engineering degrees.

Having built up a range of specialist knowledge as well as insight into the impact Computing has on society, students are better prepared to enter the lucrative world of software programming.

## Assessment and Exams

### Unit 1

On-screen exam: 2 hours.  
Students will be required to submit print-outs for external marking. Short answer questions and pre-release material.

### Unit 2

AS Written exam: 1 hour.  
Short answer questions for externally marked paper.

### Unit 3

A2 Written exam: 2 hours 30 minutes  
Short and extended answer questions.

### Unit 4

Coursework. Internally assessed. Students will document the analysis, design, construction and testing of their programmed software solution.

## Entry Requirements

5C's at GCSE, one of which must be Maths at grade B or above.

Most importantly, you must have a passionate interest in software development.