

# COMPUTING

## AS/A LEVEL COMPUTING

This modern qualification gives an insight into a range of computing systems, including an understanding of the principles of programming and the solving of problems.

### THROUGH THIS QUALIFICATION, STUDENTS CAN DEVELOP:

- The capacity to think creatively, innovatively, analytically, logically and critically
- An understanding of the organisation of computer systems
- The ability to apply skills, knowledge and understanding of computing, including programming, in a range of contexts to solve problems
- The capacity to see relationships between different aspects of the subject
- An understanding of the consequences of using computers, an awareness of emerging technologies and an appreciation of their potential impact on society.

### WHY CHOOSE OCR A LEVEL COMPUTING?

- It includes more computer science than traditional ICT
- It includes a practical coursework unit – which is the best way to assess a student's level of practical skills in computing
- There is a simple assessment method, and examination papers are externally assessed
- It is excellent preparation for students looking to take computing studies at degree level, or for anyone considering any kind of career in computing.

## AS LEVEL

Unit title	Description
<b>Computer Fundamentals</b>	Students gain an appreciation of computing fundamentals, including hardware, software, the presentation, structure and management of data, how data is transmitted and networked, the life cycle of systems development, the characteristics of information systems, and the implications of computer use.
<b>Programming Techniques and Logical Methods</b>	Students gain an appreciation of designing solutions to particular problems, how procedural programs are structured, the types of data and data structures, the common facilities of procedural languages, how to write maintainable programs, and how to test and run solutions.

## A LEVEL

Unit title	Description
<b>Advanced Computing Theory</b>	Students understand the function of operating systems, the function and purpose of translators, how computer architectures are structured, how data is represented, how data is structured and manipulated, high level language programming paradigms, low level languages and how databases function.
<b>Computing Project</b>	Through coursework, students gain an understanding of definition, investigation and analysis, system design, software development and testing, documentation, evaluation and how to produce written reports covering these topics.

## HOW IS THIS QUALIFICATION ASSESSED?

Computer Fundamentals, Programming Techniques and Logical Methods, and Advanced Computing Theory are all externally assessed through timetabled written examination. The AS papers are 1.5 hours in length, the A2 paper is 2 hours.

The Computing Project is internally assessed and externally moderated coursework.

## WHAT SUPPORT WILL I RECEIVE?

### PUBLISHERS

OCR endorses textbooks published by Hodder for AS Computing and the areas of A2 specialised computing topics.

### RESOURCES

You can download all the following resources from the OCR website – [ocr.org.uk](http://ocr.org.uk)

- Lesson plans for both AS and A2 are available
- Specimen assessment materials are available for all units
- Schemes of work are available for both AS and A2 level.

## CHANGES TO AS/A LEVELS

From September 2013, students in England, Wales and Northern Ireland will only be able to sit AS and A2 Level exams in June as there will be only one examination series each year for both AS and A2 units.

This will affect those who started their AS courses in September 2012, for whom there will be no opportunities for AS resits or A2 units in January 2014, and also students who begin A Level courses in September 2013.

## FULL PROGRESSION FROM ENTRY LEVEL TO GCSE AND A LEVEL

A Level Computing is just part of our Computer Science suite of qualifications, which also includes Entry Level Computing and GCSE Computing (part of the English Baccalaureate). Whatever the ages or abilities of your students, this innovative programme is designed to truly engage with them. Find out more about our Computer Science suite of qualifications at [ocr.org.uk/computerscience](http://ocr.org.uk/computerscience)

## CONTACT US

Keep up to date on the latest news by registering to receive e-alerts at [ocr.org.uk/updates](http://ocr.org.uk/updates)

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