Computer Science A-level
OCR Exam Board

Why Study Computer Science?

A-level Computer Science is a practical subject where students can apply the academic principles learned in the classroom to real-world systems. It is an intensely creative subject that combines invention and excitement, and can look at the natural world through a digital prism. The aims of this qualification are to enable learners to develop:

- An understanding and ability to apply the fundamental principles and concepts of computer science, including: abstraction, decomposition, logic, algorithms and data representation
- The ability to analyse problems in computational terms through practical experience of solving such problems, including writing programs to do so.
- The capacity to think creatively, innovatively, analytically, logically and critically.
- The capacity to see relationships between different aspects of computer science.

Assessment Structure

The course consists of three components:

1. **Computer systems – 40%**
   2 Hours and 30 mins written exam paper
   There will be a mix of questions including short answer, longer answer and some higher tariff questions that will test the quality of extended responses. Marks for these responses are integrated into the marking criteria
2. **Algorithms and programming – 40%**
   2 Hours and 30 mins written paper
   All questions should be answered in Section A and Section B. There will be a mix of questions including short answer, longer answer and some higher tariff questions that will test the quality of written responses via a level of response mark scheme.
3. **Programming project – 20%**
   Non-exam assessment which is internally assessed and then externally moderated by OCR. The programming project will be submitted in the form of a report that will contain the solution to a problem, selected by the learner

Possible Career Pathways:

- Application analyst
- Applications developer
- CAD technician
- Cyber security analyst
- Data analyst
- Database administrator
- Forensic computer analyst
- Game designer
- Games developer
- Information systems manager
- IT consultant
- Machine learning engineer
- Multimedia programmer
- Penetration tester
- SEO specialist
- Software engineer
- Systems analyst
- UX designer
- Web designer
- Web developer

Advised Entry Requirements:

Grade 5 in GCSE Computer Science

Specification Link
https://www.ocr.org.uk/qualifications/as-and-a-level/computer-science-h046-h446-from-2015/