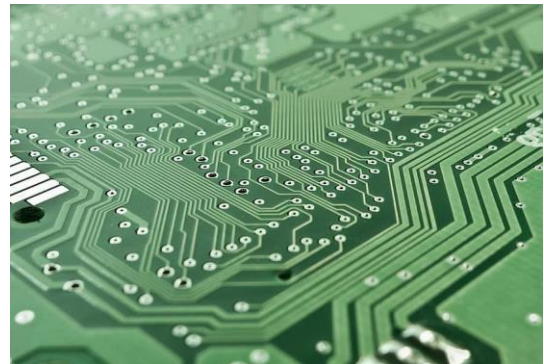
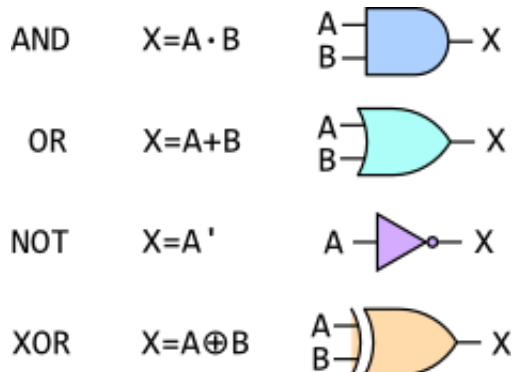
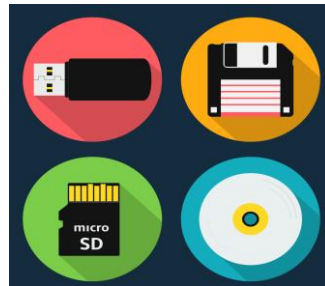
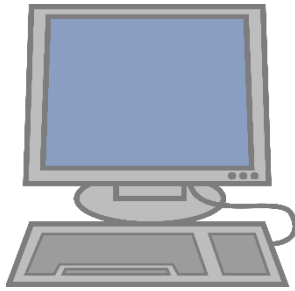


A' Level Computer Science



Introducing A' Level Computer Science

Computer Science is at the heart of modern technology and innovation. Choosing this subject gives students:

- **Problem-solving skills:** Learn to think logically and tackle complex challenges.
- **Programming expertise:** Gain hands-on experience in coding and software development.
- **Future-proof knowledge:** Understand how computers work and how technology shapes the world.
- **Career versatility:** Opens doors to fields like AI, cybersecurity, data science, and software engineering.

The OCR A' Level Computer Science course covers:

- **Fundamentals of programming:** Writing efficient, structured code.
- **Algorithms and problem-solving:** Designing solutions using computational thinking.
- **Data structures and computational theory:** Understanding how data is organised and processed.
- **Computer systems:** Hardware, software, and networking principles.
- **Impact of technology:** Ethical, legal, and societal considerations.
- **Practical programming project:** A real-world coding project to demonstrate skills.

Teaching & Learning

Our approach to Teaching and Learning in the department includes:

- **Interactive Lessons:** Concepts are taught through real-world examples and hands-on activities to make learning meaningful.
- **Practical Programming:** Students regularly code in Python, applying theory to real projects.
- **Collaborative Problem-Solving:** Group work and pair programming encourage teamwork and communication skills.
- **Independent Research:** Learners explore emerging technologies and ethical issues to develop critical thinking.
- **Supportive Environment:** Regular feedback, structured lessons, and enrichment opportunities help every student succeed.

A' Level Assessment

Students will be assessed by 2 examined component and 1 practical NEA

- Component 1 – Computer Systems
 - 140 marks
 - 2 hours 30 minutes
 - Worth 40%
- Component 2 – Algorithms and Programming
 - 140 marks
 - 2 hours 30 minutes
 - Worth 40%
- Component 3 – NEA Programming Project
 - NEA coursework
 - 70 marks
 - Worth 20%

Subject combinations

A' Level Computer Science can be studied with a wide range of other subjects, including:

- Mathematics – Strongly recommended for logical reasoning and algorithmic thinking.
- Further Mathematics – Ideal for students aiming for highly technical or theoretical computing roles.
- Physics – Useful for understanding hardware and systems concepts.
- Business Studies – Great for students interested in tech entrepreneurship or IT management.
- Economics – Helps with understanding data analysis and decision-making in tech contexts.
- Design & Technology – Supports creative problem-solving and product development.

Progression Routes

Studying A' Level Computer Science opens doors to a wide range of opportunities, and we have seen several students go onto further studies or careers in the following areas, including:

- **University Degrees**
 - Computer Science

- Software Engineering
- Cybersecurity
- Data Science
- Games Development
- **Higher Apprenticeships**
 - IT and Networking
 - Software Development
 - Cybersecurity Analyst
- **Careers in Technology**
 - Software Developer
 - Systems Analyst
 - Data Analyst
 - AI Specialist
 - Cybersecurity Professional

Entry and skill requirements

The entry requirements for A' Level Computer Science are G6 in Maths and G5 in English or English Literature.

What do our students think?

"Computer science A-level has developed my knowledge from GCSE well and has secured where I want my future to lead." – Alex

"For me, Computer Science A-Level has the perfect balance of being super interesting and super informative thanks to its curriculum and the topics covered within it. Although it is a huge and sometimes daunting subject, Mrs Kershaw and Mr Treanor manage to cut it down into manageable sizes which is definitely worth studying if you are at all interested in this field. I would recommend it to anyone else considering Computer Science as an option." - Poppy

Contact us

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