



COMPUTER SCIENCE

OCR A Level in Computer Science (H446)

COURSE OVERVIEW

The Computer Science specification will above all else be relevant to the modern and changing world of computing. The new specification will:

- Focus on programming, building on our GCSE Computing and emphasise the importance of computational thinking as a discipline.
- Have an expanded maths focus, much of which will be embedded within the course.
- Put computational thinking at its core, helping students to develop the skills to solve problems, design systems and understand human and machine intelligence.
- Allow student to apply the academic principles learned in the classroom to real world systems in an exciting and engaging manner.
- Give students a clear progression into higher education, as the course was designed after consultation with members of BCS, CAS and top universities.



HOW WILL I BE ASSESSED?

Content of Computer systems (Component 01)

- 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

Content of Algorithms and programming (Component 02)

- Elements of computational thinking
- Problem solving and programming
- Algorithms to solve problems and standard algorithms

Content of non exam assessment Programming project (Component 03 or 04)

The learner will choose a computing problem to work through according to the guidance in the specification.

- Analysis of the problem
- Design of the solution
- Developing the solution
- Evaluation

Content Overview	Assessment Overview	
<ul style="list-style-type: none"> • 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 • Elements of computational thinking • Problem solving and programming • Algorithms to solve problems and standard algorithms <p><i>The learner will choose a computing problem to work through according to the guidance in the specification.</i></p> <ul style="list-style-type: none"> • Analysis of the problem • Design of the solution • Developing the solution • Evaluation 	Computer systems (01)	40% of total A level
	140 marks 2 hours and 30 minutes written paper (no calculators allowed)	
	Algorithms and programming (02*)	40% of total A level
140 marks 2 hours and 30 minutes written paper (no calculators allowed)		
	Programming project 03* – Repository or 04* – Postal or 80 – Carry forward (2018 onwards)*	20% of total A level
	70 marks Non-exam assessment	

ENTRY REQUIREMENTS

A GCSE in the subject is desirable. However, if you have good subject knowledge and a keen interest in computing, then you would be considered for the course.



WHY STUDY THIS SUBJECT?

Studying A-Level Computer Science equips students with critical skills in programming, algorithms, and computational thinking, laying a strong foundation for tech-driven careers. This qualification is highly valued in fields such as artificial intelligence, software engineering, and cybersecurity, where technical expertise and problem-solving abilities are essential for creating innovative technology solutions.

Further Information: Please see Ms Hanlon or email shshanlon@st-anselms.com