Abbey Gate College
Sixth Form

Computer Science

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Why study this at A Level?

Problems in science, engineering, health care, and so many other areas can be solved by computers.

Students choose Computer Science for its appeal to tech enthusiasts and problem solvers, offering insights into software development and technology's societal impact.

It attracts those fascinated by computers, logic, and innovation, often complemented by a proficiency in mathematics.

Aspiring programmers, cybersecurity experts, or technology enthusiasts seek to shape the future through technology to develop world changing programs and applications.

Skills obtained

- *Teamwork & communication skills*
- *Problem solving skills: ability to identify issues and develop solutions to problems*
- *Programming skills – extend skills developed at KS4.*
- *Software development – designing, building a program through project work.*
- *Time management – revision, project writing, group work*

Our students have gone on to study a range of degree courses including: Computer Science, Software Engineering, Games Development, Robotics Information Systems and Cyber/System Security, AI.

Course Content and Assessment

Unit 1 Computer Systems (Written Paper 40%)
Students learn about the components of a computer and their uses, networking, system security, systems software and the legal, ethical, cultural and environmental impact of Computer Science.

Unit 2 Algorithms and Programming (Written Paper 40%)
This unit focuses on computational thinking, practical programming and problem solving skills, focusing on how use algorithms to solve problems.

Unit 3 Programming Project (Practical Coursework 20%):
For the coursework component students analyse, design, develop, test, evaluate and document a program written in a suitable programming language.