# AS/A Level Computer Science

**Entry Criteria:**

- You will need to achieve the pathway criteria, please see the prospectus for further information
- You will need to achieve a Grade 4 or above in GCSE Mathematics from a higher tier paper.

**Coursework/Examination Requirements:**

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| AS Assessment | One on-screen examination and one written examination each worth 50% |
| A Level Assessment | One on-screen examination and one written examination each worth 40% and one non-examined assessment worth 20%. |

**Awarding Body/Specifications:** AQA

**Advanced Level (A Level):** Computer Science is both a practical and theoretical subject, where you will apply the academic principles learned in the classroom to real-world systems. It is also a creative subject, where you will explore the possibilities of computing, and will learn to look at the world through a digital prism.

**The following units will be covered on this course:**

**AS - Year 12 Unit**

- Fundamentals of Programming
- Fundamentals of Data Structures
- Fundamentals of Algorithms
- Theory of Computation
  *Focuses on the designing, writing and testing of programs*
- Fundamentals of Data Representation
- Fundamentals of Computer Systems
- Fundamentals of Computer Organisation and Architecture
- Consequences of Uses of Computing
- Fundamentals of Communication and Networking.

**A Level - Year 13 Unit**

- Fundamentals of Programming
- Fundamentals of Data Structures
- Fundamentals of Algorithms
- Theory of Computation
  *Focuses on the designing, writing and testing of programs*
- Fundamentals of Data Representation
- Fundamentals of Computer Systems
- Fundamentals of Computer Organisation and Architecture
- Consequences of Uses of Computing
- Fundamentals of Communication and Networking
- Fundamentals of Databases
- Big Data
- Fundamentals of Functional Programming.

**Advanced Subsidiary (AS):** If you choose to study this subject for one year only you will be awarded the AS Level. You will cover the AS unit content and sit public examinations in Year 12.

**Progression:** It is excellent preparation for students looking to take Computing Studies at degree level or for anyone considering any kind of career in Computing. Please note that this qualification can be taken with the Specialist Qualification in Information Technology.

**Opportunities:** Students can become involved in after school coding clubs and there will be entries to various coding and cyber security competitions.