

EXCEPTIONAL

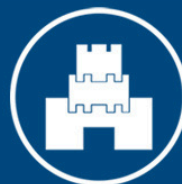
TEACHING

EXCEPTIONAL

EXPERIENCE

COMPUTER

SCIENCE



Launceston Sixth  
Part of the Athena Learning Trust

Subject Information  
For admissions in September

# Computer Science

**Course Title: A level Computer Science**

**Exam Board : AQA**

**Specification Link:**

<https://www.aqa.org.uk/subjects/computer-science-and-it/as-and-a-level/computer-science-7516-7517/specification-at-a-glance>

## Course Structure

- 10 Fundamentals of programming
- 11 Fundamentals of data structures
- 12 Fundamentals of algorithms
- 13 Theory of computation
- 14 Fundamentals of data representation
- 15 Fundamentals of computer systems
- 16 Fundamentals of computer organisation and architecture
- 17 Consequences of uses of computing
- 18 Fundamentals of communication and networking
- 19 Fundamentals of databases
- 20 Big Data
- 21 Fundamentals of functional programming
- 22 Systematic approach to problem solving
- 23 Non-exam assessment - the computing practical project

## Entry Requirements:

5 GCSE(s) at 9-5 including English and Grade 6 in Maths and Sciences

## Possible Progression Routes:

The course could lead to numerous university courses in the computer science or science faculties. Also to careers and apprenticeships in the IT and communications industry

## Equipment required:

Access to a computer with the appropriate software. Most software required is free to download. If there is any cost for software students may be eligible for support from the 16-19 bursary.

## **Supporting Subjects:**

Maths and Physics

## **Assessments:**

### **Paper 1**

What's assessed: this paper tests a student's ability to program, as well as their theoretical knowledge of Computer Science from subject content 10-13 above and the skills required from section 22 above.

#### **Assessed**

On-screen exam: 2 hours 30 minutes

40% of A-level

#### **Questions**

Students answer a series of short questions and write/adapt/ extend programs in an Electronic Answer Document provided by us. We will issue Preliminary Material, a Skeleton Program (available in each of the Programming Languages) and, where appropriate, test data, for use in the exam.

### **Paper 2**

What's assessed: this paper tests a student's ability to answer questions from subject content 14-21 above.

#### **Assessed**

On-screen exam: 2 hours 30 minutes

40% of A-level

#### **Questions**

Compulsory short-answer and extended-answer questions.

### **Non-Exam Assessment**

What's assessed: the non-exam assessment assesses student's ability to use the knowledge and skills gained through the course to solve or investigate a practical problem. Students will be expected to follow a systematic approach to problem solving, as shown in section 22 above.

#### **Assessed**

75 marks

20% of A-level

## **Component Content:**

### **Paper 1**

This component will incorporate and build on the knowledge and understanding in the field of programming, data structures, problem solving & algorithms and the theory of computation.

### **Paper 2**

This component will introduce learners to the internal architecture and systems of a computing device, how data is represented and processed, the exchange and management of data including data management systems and legal and ethical issues.

### **Non-exam Assessment**

Learners will be expected to analyse, design, develop, test, evaluate and document a program written in a suitable programming language. The underlying approach to the project is to apply the principles of computational thinking to a practical coding problem. Learners are expected to apply appropriate principles from an agile development approach to the project development. While the project assessment criteria are organised into specific categories, it is anticipated the final report will document the agile development process and elements for each of the assessment categories will appear throughout the report..

## **Subject contact:**

Mr Wayne Kettle

wkettle@launcestoncollege.uk

# How to apply?

To apply to Launceston Sixth please complete our online application form. If you cannot access the website, or would like to submit a paper based application please email or call.

**[www.launcestoncollege.uk/sixth-form](http://www.launcestoncollege.uk/sixth-form)**

**[sixthform@launcestoncollege.uk](mailto:sixthform@launcestoncollege.uk)**

**01566 771855**

Our admissions team will then be in contact to arrange a Sixth Form interview to discuss your options, your aspirations, and to provide advice and guidance on your next steps.