

# CARDINAL NEWMAN CATHOLIC SCHOOL



## **Computer science**

A Level

#### Overview of the course

This course covers the theoretical and practical aspects of Computer science and computational methods. If you are interested in using computers to analyse and solve problems this is the course for you. It will teach you the skills required to work in an IT focused business or industry. You will use problem solving skills and develop software development skills of analysis, design and evaluation.

#### What are the entry requirements?

The entry requirement for this course is at least a 6 in computer science and Mathematics and a 5 in English, at GCSE level. Students who have got an 7 and above in Mathematics, but no computing qualifications, are encouraged to apply.

#### How is the course assessed?

To complete the A Level year of the course you will study three units. These will be assessed by written examinations and large coursework submission.

#### Current and Future in-demand jobs

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/ attachment\_data/

file/391911/15.01.05.\_UKCES\_Career\_Brochure\_V13\_reduced.pdf

https://www.zdnet.com/article/the-10-it-jobs-that-will-be-most-in-demand-in-2020/

https://www.weforum.org/agenda/2016/01/8-jobs-every-company-will-be-hiring -for-by-2020/

https://www.topuniversities.com/student-info/careers-advice/what-will-hottest-jobs-be-2020



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### POSSIBLE CAREER OPTIONS

Application analyst , Applications developer, CAD technician, Cyber security analyst, Data analyst, Database administrator, Forensic computer analyst, Game designer, Games developer, Information systems manager, IT consultant, Machine learning engineer, Multimedia programmer.





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# **Computer science**

A Level

project

70 marks

Non-exam

assessment

**Content Overview** 

**Assessment Overview** 

- The characteristics of contemporary processors, input, output and storage processors
- 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

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

Compute systems	
140 marks	
2 hours and 30 Mins	<b>40%</b> of total
written paper	A level
Algorithms and	
programming	
(02*)	40%
140 marks	of total
2 hours and	A level
30 minutes	
Programming	

**20%** of total A level



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