



Mayfield School  
being the best that we can be

FACULTY OF  
BUSINESS &  
COMPUTING

**GCE  
COMPUTER  
SCIENCE**

**EXAM BOARD**

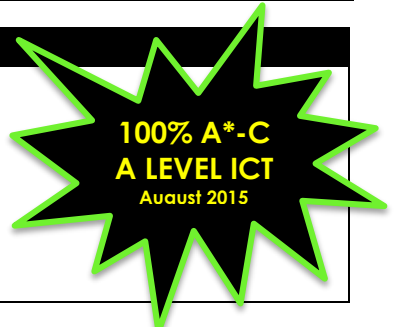
**AQA**


**SYLLABUS NUMBER**

**7516/7517**

**WHAT WILL I STUDY?**

Advances in computing are transforming the way we work and the new Computer Science specifications for A Level is changing with the times. Computer Science is an exciting subject that encourages students to think creatively, logically and critically and to develop advanced problem solving skills. If you are passionate about computers and want to learn about computer architecture; communications and networking; fundamentals of data representation and data structures then this is definitely the course for you!



AS	SUBJECT CONTENT	ASSESSMENT
	1 Fundamentals of programming 2 Fundamentals of data structures 3 Systematic approach to problem solving 4 Theory of computation 5 Fundamentals of data representation 6 Fundamentals of computer systems 7 Fundamentals of computer organisation and architecture 8 Consequences of uses of computing 9 Fundamentals of communication and networking	 <ul style="list-style-type: none"> <li>✓ Paper 1 is an on-screen exam which is 1 hour and 30 minutes and is worth 50% of your AS. This paper is based on theoretical knowledge of computer science from subject content 1-4.</li> <li>✓ Paper 2 is a written exam which is 1 hour and 30 minutes and is worth 50% of your AS. This paper is based on theoretical knowledge of computer science from subject content 5-9.</li> </ul>

A-LEVEL	SUBJECT CONTENT	ASSESSMENT
	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	<ul style="list-style-type: none"> <li>✓ Paper 1 is an on-screen exam which is 2 hours and 30 minutes and is worth 40% of your A Level. This paper is based on theoretical knowledge of computer science from subject content 10-13, 22.</li> <li>✓ Paper 2 is a written exam which is two hours and 30 minutes and is worth 40% of you're A Level. This paper is based on theoretical knowledge of computer science from subject content 14-21.</li> <li>✓ Non-Exam Assessment - assesses student's ability to use the knowledge and skills gained through the course to solve or investigate a practical problem from subject content 23 – 20% of A Level.</li> </ul>

WHY SHOULD I TAKE THIS SUBJECT?	POSSIBLE JOB ROUTES
The choice is absolutely yours, but here are a few reasons outlining why you should take the subject: <ul style="list-style-type: none"> <li>✓ If you enjoy problem solving through programming.</li> <li>✓ If you are interested in Computer Architecture ('Inside a PC')</li> <li>✓ If you are interested in the building blocks of computing and technology and are interested in how it all works!</li> </ul>	<ul style="list-style-type: none"> <li>✓ Computer Engineer</li> <li>✓ Software engineer</li> <li>✓ Systems analyst/designer</li> <li>✓ Web developer</li> <li>✓ Computer Programmer</li> </ul>

WHO CAN I TALK TO?	USEFUL RESOURCES
<ul style="list-style-type: none"> <li>✓ Ms Hashmi (Faculty Leader of Business and Computing)</li> <li>✓ Mrs Nwokolo (Subject Lead for Computing)</li> <li>✓ Mr De Bique (Teacher of Computing)</li> </ul> Email the department for more information at <a href="mailto:computing@mayfieldschool.net">computing@mayfieldschool.net</a>	<ul style="list-style-type: none"> <li>✓ <a href="http://www.aqa.org.uk">www.aqa.org.uk</a></li> <li>✓ <a href="http://www.teach-ict.com">www.teach-ict.com</a></li> <li>✓ <a href="http://www.stackoverflow.com">www.stackoverflow.com</a></li> </ul>

Last year, August 2015, **ALL** ICT students achieved a grade C or above in A Level ICT. Two thirds of the class went on to study an ICT/Computer Science related degree at uni!