

ABS Curriculum Content

SUBJECT OVERVIEW Computing

AIMS: We offer a wide computing curriculum to ensure that it is inclusive for all students regardless of their skills and experiences before coming to the department.

ENRICHMENT OPPORTUNITIES:

Film Club Wednesday 2:45 to 3:45

DETAILS OF HOW TO ACCESS FURTHER INFORMATION ON THE CURRICULUM

<https://www.bbc.co.uk/education>

<https://www.cambridgegcsecomputing.org/>

	HT1	HT2	HT3	HT4	HT5	HT6	External assessment
7	Digital Literacy Students will be introduced to the 365 Office environment by completing several tasks using a range of software.	Kodu Kodu is an introduction to programming where students will create virtual worlds and characters to interact with. Students will create design and create their own genre of game using their skills they have gained lesson and more importantly their imagination.		What are Computers Students will practical investigate what makes a computer work by taking one apart! Students will develop their knowledge in basic language in	Web Awareness Students will develop an understanding of the moral obligations of using the internet and how to stay safe. Students will also have an introduction to basic html script by creating information page.	Mirco Bit Students will develop their understanding of using textual coding and use a range of sensors to create interactive program on small computer.	

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<p>8</p>	<p>Grand Designs Students will plan, design and create their virtual dream home using a range of software. At the end of the unit of work students will produce portfolio of evidence to possible investors.</p>	<p>Digital Imaging How are images manipulated in the media? Students will learn how images are altered and create their own fake news articles using their own digital images they have manipulated.</p>	<p>Web Development Students will develop their own websites learning how HTML code is used to create webpages. Students will also learn how data is sent over the internet.</p>	<p>Animation When creating a product students will need know about the system life cycle and they will use this in the creation of their animation.</p>	<p>Python Python is a textual programming language which is used in KS4. Students will complete several tasks building up to creating their own text based adventure game.</p>		
<p>9 OCR Computer Entry</p>	<p>Students will develop knowledge in components of a computer, internal components of a computer and their function, peripherals and their function. Operating System</p>	<p>Students will develop knowledge in System Software types of utility software in different contexts, types of application software in different context, Primary Storage, Secondary Storage</p>	<p>Students will learn about moral issues legal issues, environmental issues, open source and proprietary software, legislation</p>	<p>Students will develop knowledge in binary numbers and how it is used to store a range images, music and video. Students will further develop an understanding of number system and how they can be converted.</p>	<p>Students will develop knowledge in units of computer memory, data structure and data compression, data in the form of binary digits, variables, input, output and storage of data, sequence selection</p>	<p>Students will develop knowledge in iteration, operators, and comments. A programming assessment will be carried out.</p>	

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<p>10 OCR Computer Science 9-1</p>	<p>Students will develop knowledge in computer systems focusing on the following areas: The CPU Memory CPU and System Performance Secondary Storage Systems Software Open Source and Proprietary Software</p>	<p>Students will develop knowledge in computer systems focusing on the following areas: Networks - LANs and WANs Networks - Hardware Client-Server and Peer-to-Peer Networks</p>	<p>Students will develop knowledge in computer systems focusing on the following areas: Network Topologies Network Protocols Networks - The Internet Network Security Threats</p>	<p>Students will develop knowledge in computer systems focusing on the following areas: Ethical and Cultural Issues Environmental Issues Computer Legislation</p>	<p>Students will develop knowledge in computational thinking by completing tasks in: Writing Algorithms Search Algorithms Sorting Algorithms</p>	<p>Students will develop knowledge in computational thinking by completing tasks in: Programming Basics Constants and Variables Strings Program Flow Boolean Operators</p>	
<p>11 OCR Computer Science 9-1</p>	<p>Students will develop knowledge in computational thinking by completing tasks in: File Handling Storing Data Arrays Sub Programs</p>	<p>Students will develop knowledge in computational thinking by completing tasks in: Defensive Design Testing Translators Integrated Development Environments Students will continue to Controlled assessment</p>	<p>Students will develop knowledge in computational thinking by completing tasks in: Logic Units Binary Numbers Hexadecimal Numbers Characters Storing Images Storing Sound Controlled assessment</p>	<p>Students will continue exam preparation and completion of any outstanding control assessment.</p>			<p>Comp 1 Computer Systems 40% 1 hour 30 min paper</p> <p>Comp 2 Computational Thinking 40% 1 hour 30 min paper</p> <p>Programming Project 20% of final mark</p>

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<p>12 OCR Cambridge Technicals in Digital Media</p>	<p>Unit 1: Students will develop insights into the media products that they interact with every day. The aim of the unit is understand how different media institutions operate. Unit 3: Students will develop knowledge and understanding of the production processes for producing print based, audio-visual and audio media products.</p>	<p>Unit 3: Continued Unit 1: Continued</p>	<p>Unit 20: In this unit students will explore a range of advertising campaigns and how the producers of this campaigns used audio-visual, print-based and audio mediums. Unit 21: In this unit students will generate ideas for your own print, audio or audio visual media product.</p>	<p>Unit 20: Continued Unit 21: Students will choose to focus on either print, audio, or audio-visual media. By completing this unit, students will be able to generate ideas for their own media product based on a client brief, pitch their ideas to a client, and be able to respond to feedback to prepare their idea for pre-production</p>	<p>Unit 1: Students will develop insights into the media products that they interact with every day. The aim of the unit is understand how different media institutions operate.</p>	<p>Unit 23: Students will identify content to be included in your showcase, as well as create an adaptation of a piece of your existing media work. Unit 1: continued</p>	<p>Unit 1 Paper 1 hour 30 min examination, Unit 3 practical assessment, Unit 20 practical assessment, Unit 23 practical assessment</p>

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<p>13 OCR Cambridge Technicals in IT</p>	<p>Unit 1: Students will have a sound understanding of IT technologies and practices is essential for IT professionals. Information learnt in this unit will provide a solid foundation in the fundamentals of hardware, networks, software, the ethical use of computers and how business uses IT</p>	<p>Unit 2: This unit will provide students with a greater understanding of how organisations use information sources both internally and externally and the types of information you will encounter</p>	<p>Unit 9: The purpose of this unit is to prepare students to undertake product development activities. Students will learn about different product design methodologies and the role of the product development life cycle. In addition, students will discover the factors that influence product developments.</p>	<p>Unit 17: You will learn about the Internet of Everything (IoE) and how it is used. Using your knowledge you will carry out a feasibility study for a potential idea. You will pitch your idea to potential stakeholders and use their feedback to revise your proposal.</p>	<p>Unit 1: Students will have a sound understanding of IT technologies and practices is essential for IT professionals. Information learnt in this unit will provide a solid foundation in the fundamentals of hardware, networks, software, the ethical use of computers and how business uses IT</p>	<p>Unit 2: This unit will provide students with a greater understanding of how organisations use information sources both internally and externally and the types of information you will encounter</p>	<p>Unit 1 and Unit 2 examination each paper is 1 hour 30 mins</p>
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