St Cuthbert Mayne School Curriculum Map

Year 12

Department: COMPUTING

Key Stage 5 Curriculum Summary
Exam Board: OCR
Course title: Cambridge Technicals in IT Level 3

Students will follow the Cambridge Technicals syllabus which has been developed by the OCR exam board. This course is equivalent to an A level and provides students with the necessary UCAS points and skills to progress onto university.

Students will have the opportunity to develop their planning and evaluation techniques within a variety of specialised units. During the 2 year course students will study 6 units of work including website design, graphic design, animation techniques and computer networks and systems.

Year 12 Autumn Term 1 & 2					
Topic/Unit	**Unit1 - Fundamentals of IT** This unit helps to develop a student's understanding and prepares them for the units to come. It covers basic IT concepts and more progressing students' understanding of more complex topics of Computer Science.				
Knowledge (Content covered)	**LO1 - Understand computer hardware** Topics in this section are: • Input, output and communication devices. • Computer components • Types of computer systems • Connectivity • Troubleshooting hardware and software • Data representation and binary	**LO2 - understand computer software** Topics in this section are: • Types of software • Application software • Utility software • Communication methods • Operating systems • Software troubleshooting	**LO3 - understand business IT systems** Topics in this section are: • Types of servers • Virtualisation • Networking characteristics • Connectivity methods • Business systems	**LO4 - understand employment and communication skills used in an IT environment** Topics in this section are: • Communication skills • Personal attributes • Ready for work • Communication technology • Professional bodies and industry certificates	**LO5 - understand ethical and operational issues and threats to computer systems** Topics in this section are: • Ethical issues • Operational issues • Threats • Physical security • Digital security • Safe of data and computer equipment
Skills	Interview skills, IT skills				
Assessment	1.5 hour examination				
Gatsby 4 (Linking curriculum learning to careers) GATSBY BENCHMARK 4		Web developer. Systems analyst. Product manager.		Network manager. Network technician. Network architect	

Year 12 Autumn Term 2 and Spring Term 1 & 2				
Topic/Unit	**Unit 12 - Mobile Technologies**			
Knowledge (Content covered)	Students may come to this unit as a proficient user of a mobile phone, but they may be less familiar with other mobile technologies and their operating systems. The aim of this unit is to broaden their knowledge and understanding of the wider potential of mobile technologies and its consequences to people and businesses. This unit is as much about new technologies as it is about promoting critical analysis of existing situations and proposing better solutions.			
Unit Break down	LO1 Understand mobile technologies	LO2 Be able to investigate how businesses use mobile technologies	LO3 Be able to determine solutions for the use of mobile technologies	LO4 Be able to present solutions for the use of mobile technologies
Skills	Marketing and project planning			
Assessment	Internally assessed coursework - this is one of three pieces of coursework			
Gatsby 4 (Linking curriculum learning to careers) GATSBY BENCHMARK 4	Public relations Company marketing Solution Developer			

Year 12 Summer Term 1 & 2	
Topic/Unit	**Unit 6 - Application Design**
Knowledge (Content covered)	The world is increasingly reliant on applications that help individuals, businesses and organisations achieve specific activities or purposes. In this unit students will explore potential ideas for a new application and develop the fundamental design for it. They will then develop the designs for an application and how users will interact with it. The application that students will design could be for any sector and for any purpose. They will have the opportunity to present their ideas, prototype them and gain feedback before refining their design. Besides the technical knowledge that students will gain about designing an application, they will also learn key transferable skills about liaising with clients, questioning people effectively to gain the information they need to develop successful designs, and presenting their ideas to an audience and getting feedback from them. This unit is mandatory to the Application Developer pathway due to its relevance to the job role of an application developer. The unit supports the development of skills, knowledge and understanding appropriate to a wide range of job roles requiring the development of applications within mobile technology, business software, graphics, games and web design to name but a few.
Skills	Project planning, problem solving
Assessment	Internally assessed coursework - this is one of three pieces of coursework
Gatsby 4 (Linking curriculum learning to careers) GATSBY BENCHMARK 4	The unit supports the development of skills, knowledge and understanding appropriate to a wide range of job roles requiring the development of applications within mobile technology, business software, graphics, games and web design to name but a few.