

BTHCC Computer Science Curriculum 2021

In Computing we develop innovative future leaders in the digital world who can use computational thinking to solve real world problems. We are dedicated to providing our students with the knowledge and tools to use technology responsibly, safely and ethically.

Computational Thinking	Computer Systems
Programming	Network and communication
Data representation	Cyber security
Impact of technology	Digital Artefact/Creative project

Critical Thinkers
 Global Citizens
 Nurtured Individuals
 Influential Communicators
 Powerful Knowledge
 Deepening Faith

	HT 1	HT 2	HT 3	HT 4	HT 5	HT 6
YEAR 7	Collaborating online safely	Binary	Components of computers	Network	Scratch	App development
YEAR 8	Binary images	Databases	HTML	Google Sketch up	Environmental impact	Python basics
YEAR 9 Computing and Enterprise	Business Enterprise	Binary sound	Network security	External/Ethical impacts on businesses	Software in businesses Spreadsheets	Python advanced

GCSE AQA Paper 1-Computational thinking and programming skills (50%)

Paper 2: Computing concepts

	HT 1	HT 2	HT 3	HT 4	HT 5	HT 6
Recap and Retrieval of all Paper 2 topics Computer Systems, Data Representation, Networks and Communication, Cyber Security, Databases & SQL and Impacts of Technology						
YEAR 10	Paper 1- 3.1 Fundamentals of Algorithms	Paper 1- 3.2 Programming	Paper 1- 3.2 Programming	Paper 1- 3.1 Fundamentals of Algorithms	Paper 2- Data Representation	
YEAR 11	Paper 1- 3.1 Fundamentals of Algorithms	Paper 1- 3.2 Programming	Paper 1- 3.2 Programming	Paper 1- 3.1 Fundamentals of Algorithms	Recap and Revision for all Paper 1	Paper 1 and Paper Exams

A LEVEL COMPUTER SCIENCE

PAPER 2- Computational Thinking and Programming (40%)

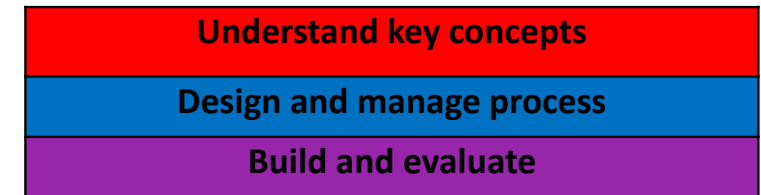
PAPER 2: Computing Concepts(40%)









NON-EXAM ASSESSMENT – Programming Project(20%)

	HT 1	HT 2	HT 3	HT 4	HT 5	HT 6
Year 12 Teacher 1	Fundamentals of data representation	Fundamentals of communication and networking	Fundamentals of data structures	Fundamentals of algorithms	NEA Programming Project • Analysis • Design • Implementation	
Year 12 Teacher 2	Fundamentals of computer systems and architecture	Consequences of uses of computing	Fundamentals of databases	Fundamentals of programming		
Year 13	NEA- Programming Project Implementation Testing Evaluation	Fundamentals of programming Fundamentals of data structures Fundamentals of algorithms Theory of computation	Fundamentals of communication and networking	Big Data Fundamentals of functional programming	Prep for Skeleton Code	Paper 1 and 2 A Level Exams

BTHCC Design Information Technology Curriculum 2021

Learners will acquire technical knowledge and skills, learning through vocational contexts and in doing so will make them work ready for this sector. The knowledge and skills will be built up using data interpretation, data presentation and the impact of data protection throughout the course. The aim is to show students the value of learning skills, knowledge and vocational attributes to complement their GCSE's. Learners will also broaden their horizons and be aware of the various progression options available to them.



Component 1- User Interfaces			Component 2- Collecting, Presenting and Interpreting Data			
Component 3- Effective Digital Working Practices						
	HT 1	HT 2	HT 3	HT 4	HT 5	HT 6
YEAR 10	Investigate the role and impact of using data on individuals and organisations 	Create a dashboard using data manipulation tools 	Draw conclusions and review data presentation methods 	Modern Technologies 	The wider implications of digital systems 	Revise for assessment
YEAR 11	Investigate user interface design for individuals and organisations 	Use project planning techniques to plan and design a user interface 		Develop and review a user interface 	Resubmission of any components	



Critical Thinkers



Global Citizens



Nurtured Individuals



Influential Communicators



Powerful Knowledge



Deepening Faith