

Subject: BTEC Nationals AAQ Information Technology

Curriculum Intent Document:

	Year 12	Year 13
Autumn 1	<p>Topic: Unit 3 – Web Development</p> <p><u>Content covered, including knowledge and skills:</u></p> <p><u>Learning Aim A</u></p> <p>A1 – Purpose and Principles of Websites A2 – Planning a website in response to a client brief.</p> <p><u>Learning Aim B</u></p> <p>B1 – Website Design B2 – Asset Management Techniques</p> <p><u>Learning Aim C</u></p> <p>C1 – Common Tools and Techniques to produce a website. C2 – Website Development Processes C3 - Testing</p>	<p>Topic: Unit 2 – Cyber Security and Incident Management</p> <p><u>Content covered, including knowledge and skills:</u></p> <p><u>Learning Aim A</u></p> <p>A1 – Cyber Security Threats A2 – System Vulnerabilities A3 – Legal Responsibilities A4 – Software and Hardware Security Measures</p> <p><u>Learning Aim B</u></p> <p>B1 – Network Types B2 – Network Components B3 – Networking Infrastructure Services and Resources</p> <p><u>Learning Aim C</u></p> <p>C1 – Internal Policies</p>
Autumn 2		
Spring 1		
Spring 2		
Summer 1		
Summer 2		

	<p><u>Links to prior learning:</u></p> <p>Year 9</p> <ul style="list-style-type: none"> - HTML/CSS Web Development <p><u>Links to British Values and SMSC</u></p> <p>Students will be able to plan and create a website to meet a client brief. Students will have to perform market research for what website they wish to produce as well as produce wireframes and asset tables in planning for their website.</p> <p>Students will need to code in HTML, CSS and Javascript in order to code a website to be given to a client and meet their requirements.</p> <p><u>Career opportunities:</u></p> <ul style="list-style-type: none"> - Website Developer - Asset Management - Project Manager <p><u>Literacy: Key words and terminology:</u></p> <ul style="list-style-type: none"> - Asset - Wireframe - Market Research - User Requirements 	<p>Learning Aim D</p> <p>D1 – Forensic Collection of Evidence D2 – Systematic Forensic Analysis of a Suspect System</p> <p><u>Links to prior learning:</u></p> <ul style="list-style-type: none"> - DIT Component 3 - CompSci – Unit 6 Cyber Security <p><u>Career opportunities:</u></p> <ul style="list-style-type: none"> - Cyber Security Consultant - Ethical Hacker - Database Technician - IT Technician - Network Manager - Web Designer - Systems Administrator <p><u>Links to British Values and SMSC</u></p> <p>Students will be able to study cyber security threats and vulnerabilities and learn the techniques to protect organisations against threats and managing different security incidents.</p> <p><u>Literacy: Key words and terminology:</u></p>
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	<ul style="list-style-type: none">- Page Layout- Navigation Bar- Hamburger Menu- Call to Action- Colour Scheme- Typography- User Experience- User Interface- Parallax Scrolling- Image Slider- Copyright- Data Protection- Accessibility Needs- Site Map- Wireframing- Hierarchy- Alignment- Stock Image- Folder Structure- Anchor- Tables- Formatting- Slider- Gallery- Accordion- Modal Box- Hover Effect- Alt Text- Text to Speech- WCAG	<ul style="list-style-type: none">- Sabotage- Deliberate- Interference- Vetting- Negligence- Boot Sector- Macro- Worm- Rootkit- Polymorphic- Keylogger- Encryptor- Doxxing- Denial of Service- Hijack- Data poisoning- Deepfake- Phishing- Pretexting- Tailgating- Compensation- Statutory- Firewall- Hash Checking- Backdoors- SQL Injection- OEM- Wi-fi Standards- Port Scanning- Vulnerability
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- W3C
- HTML5
- Javascript
- Function
- Tag
- Class
- Interactivity

Topic: Unit 1 – Web Development

Content covered, including knowledge and skills:

Learning Aim A

- A1 – Functions and Use of Digital Devices
- A2 – Peripheral Devices and Media
- A3 – Computer Software in an IT System
- A4 – Choosing IT Systems
- A5 – Emerging Technologies

Learning Aim B

- B1 – Connectivity
- B2 – Networks
- B3 – Issues Relating to Transmission of Data

Learning Aim C

- C1 – Online systems

- Quarantine
- Inheritance
- Security Tokens
- DRM
- AES
- RSA
- Intranet
- Extranet
- Scalability
- Virtualisation
- Configuration
- Redundancy
- Gateway
- NFC
- Data Packets
- Dynamic
- Authentication
- DNS
- Routing
- DHCP
- Server
- XML
- Executable
- Forensic
- Analysis
- Wireless Access Point
- Timestamp
- Negligence
- Regulation

	<p>C2 – Online Communities</p> <p><u>Learning Aim D</u></p> <p>D1 – Threats to Data, Information and Systems D2 – Protecting Data</p> <p><u>Learning Aim E</u></p> <p>E1 – Online Services E2 – Using and Manipulating Data</p> <p><u>Learning Aim F</u></p> <p>F1 – Moral and Ethical Issues F2 – Legal Issues</p> <p><u>Links to prior learning:</u></p> <p>Year 11</p> <ul style="list-style-type: none"> - DIT Component 3 - CompSci – Unit 1 Algorithms - CompSci – Unit 4 Computer Systems - CompSci – Unit 5 Networks - CompSci – Unit 6 Cyber Security - CompSci – Unit 8 Ethical Issues <p><u>Links to British Values and SMSC</u></p>	<p><u>Topic:</u> Unit 4 – Relational Database Management</p> <p><u>Content covered, including knowledge and skills:</u></p> <p><u>Learning Aim A</u></p> <p>A1 – Relational Database Management Systems A2- Manipulating Data Structures and Data in Relational Databases A3 – Normalisation A4 – Planning a Relational Database Solution in response to a client brief.</p> <p><u>Learning Aim B</u></p> <p>B1 – Relational Database Design Techniques and Processes B2 – Design Documentation B3 – Reviewing and Refining Designs</p> <p><u>Learning Aim C</u></p> <p>C1 – Producing a Database Solution C2 – Testing the Database Solution C3 – Reviewing the Database Solution C4 – Optimising the Database Solution</p>
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	<p>Students will study the role of IT affecting individuals and organisations. Students will gain the knowledge required for a range of issues related to IT in professional situations.</p> <p><u>Career opportunities:</u></p> <ul style="list-style-type: none"> - Website Developer - Network Manager - Cyber Security Consultant - AI Analyst - Data Analyst - IT Consulatant 	<p><u>Links to prior learning:</u></p> <ul style="list-style-type: none"> - CompSci – Unit 7 Databases <p><u>Career opportunities:</u></p> <ul style="list-style-type: none"> - Cyber Security Consultant - Database Technician - IT Technician - Network Manager - Systems Administrator
	<p><u>Literacy: Key words and terminology:</u></p> <ul style="list-style-type: none"> - Multifunctional Device - Server - Internet of Things - Flowchart - System/Network Diagram - Assistive Technology - Adaptive Keyboard - Data Processing - Operating System - Multi Tasking - Device Driver - Application - Utility - Command Line 	<p><u>Links to British Values and SMSC</u></p> <p>Students will be able to study relational database development to understand the importance of data storage and normalisation techniques and apply their skills to a client’s requirements.</p> <p><u>Literacy: Key words and terminology:</u></p> <ul style="list-style-type: none"> - Relation - Database - Domain - Tuple - Cardinality - Primary Key - Foreign Key - Integrity - Normalisation

	<ul style="list-style-type: none">- GUI- Specification- Compatibility- Implementation- Data Logging- User Experience (UX)- Integration- Ethernet- Wi-Fi- Topology- VPN- Protocol- SMTP- POP- IMAP- HTTP(S)- Compression- Lossy- Lossless- Cloud Computing- Scalability- Wiki- Chatroom- Vlog- Podcast- Forum- Social Engineering- Hackers- File Permissions- Biometrics	<ul style="list-style-type: none">- Relationship- Validation- Radio Button- Combo Box- Input Mask- Criteria- Wild Card- Query- Macro- Automation- Erroneous- Extreme- Report- Menu
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	<ul style="list-style-type: none">- Digital Certificate- Transactional Data- Targeted Marketing- Collaborative Working- Primary- Secondary- Copyright- Computer Misuse- Health and Safety- Equality Act- Data Protection/GDPR	
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