

**Curriculum intent:**

**Why ICT?**

In ICT, Learners will develop a common core of IT knowledge and study areas such as the relationship between hardware and software that form an IT system, managing and processing data to support business and using IT to communicate and share information.

ICT is an integral part of our lives and features heavily in both our leisure time and working lives. ICT teaches students essential skills in a variety of key software areas such as databases, spreadsheets and social media applications.

**Why BTECs Nationals?**

BTECs embody a fundamentally learner-centred approach to the curriculum, with a flexible, unit-based structure and knowledge applied in project-based assessments. They focus on the holistic development of the practical, interpersonal and thinking skills required to be able to succeed in employment and higher education. Pearson have worked with many employers, higher education providers, colleges and schools to ensure that their needs are met. Employers are looking for recruits with a thorough grounding in the latest industry requirements and work-ready skills such as teamwork. Higher education needs students who have experience of research, extended writing and meeting deadlines

**Curriculum Implementation**

Each year, we cover two strands in Information Technology, one focussing on the internally assessed unit and one focussing on the externally assessed unit.

**Internally assessed units**

Year	Hours per week	Term	Content	Rationale
12	3	Autumn 1 & 2	<p><b>Unit 3: Using Social Media: Learning aim A.</b></p> <p>Focus here is on teaching curriculum content and carrying out preparatory tasks in order to prepare students to conduct learning aim A (a presentation or report on social media to a local chamber of commerce which they complete by the end of Autumn term 2.</p> <p><b>Content covered:</b> Explore the impact of</p>	<p>A new area for students, in terms of theory content but also very familiar, as students are used to using social media outside of school. The key difference is that here they need to link this to a vocational context. This culminates in an internally assessed report or presentation.</p> <p><b>Prior learning</b></p>

			<p>social media on the ways in which businesses promote their products and services</p> <p>A1 Social media providers A2 Business uses of social media A3 Risks and issues</p>	<p>This reactivates student knowledge from the BTEC ICT course sat in year 10 and 11 where students were required to produce an ICT solution for a particular business.</p> <p>This also reactivates students skills in presenting information also developed at KS4 in ICT and in ICT units throughout KS3</p>
12	3	<p>Spring term 1 &amp; 2</p> <p>Summer term 1</p>	<p><b>Unit 3: Using Social Media: Learning aim B&amp;C.</b></p> <p>Teaching of curriculum content alongside students carrying out preparation and implementation of a social media campaign for a local business. Which they complete before the end of Summer term 1 in line with the assessment plan.</p> <p><b>Content covered</b> Develop a plan to use social media in a business to meet requirements:</p> <ul style="list-style-type: none"> <li>• Social media planning processes</li> <li>• Business requirements</li> <li>• Content planning and publishing</li> <li>• Developing an online community</li> <li>• Developing a social media policy</li> <li>• Reviewing and refining plans</li> </ul> <p>Implement the use of social media in a business:</p> <ul style="list-style-type: none"> <li>• Creating accounts and profiles</li> <li>• Content creation and publication</li> <li>• Implementation of online community building</li> <li>• Data gathering and analysis</li> <li>• Skills, knowledge and behaviours</li> </ul>	<p>Theory content is new, but students are used to the planning process as this is carried out as part of the GCSE NEA. This unit culminates in completion for of a social media plan and campaign for a small business which is internally assessed.</p> <p><b>Prior learning</b> This reactivates student knowledge from the BTEC ICT course sat in year 10 and 11 where students were required to produce planning documents for an ICT solution for a particular business.</p> <p>This also reactivates students skills in producing creative content in line with a client’s criteria, skills developed at KS4 in ICT and Computing and in ICT units throughout KS3</p>

12	3	Summer term 2	<p><b>Unit 5: Data Modelling</b>                  In readiness for starting the data modelling unit in year 13, students are reminded how to use Spreadsheets and work through a series of tasks to build up spreadsheet skills.</p>	<p>Spreadsheet skills are needed to be able to carry out unit 5 in year 13. As the unit 3 work will have been completed and moderated by this point students are freed up at this point in the year to move on carry out preparation for year 13 work.</p> <p><b>Prior learning</b>                  This reactivates student knowledge from the BTEC ICT course sat in year 10 and 11 where students were taught how to use Spreadsheets and also were required to develop a spreadsheet model for a business.</p> <p>This also reactivates Spreadsheet skills from KS3 ICT units.</p>
13	3	Autumn 1 & 2	<p><b>Unit 5: Data Modelling: Learning aim A.</b></p> <p>Focus here is on teaching curriculum content and carrying out preparatory tasks in order to prepare students to conduct learning aim A (a presentation or report evaluating the role of data modelling in the decision-making process, which they complete by the end of Autumn term 2.</p> <p><b>Content covered:</b>                  Investigate data modelling and how it can be used in the decision-making process</p> <ul style="list-style-type: none"> <li>• Stages in the decision making process</li> <li>• Spreadsheet features used to support data modelling</li> <li>• Using data modelling to consider alternatives</li> <li>• Evaluating models</li> <li>• Documenting and justifying decisions</li> </ul>	<p>Students are familiar with the use of data models but the focus here is on looking in a greater level of depth at how data modelling can be used to aid business decision making, culminating in an internally assessed report or presentation.</p> <p><b>Prior learning</b>                  This reactivates student knowledge from the BTEC ICT course sat in year 10 and 11 where students were required to develop spreadsheet models for a business context.</p> <p>This also reactivates students skills in presenting information also developed at KS4 in ICT and in ICT units throughout KS3</p>

13	3	<p>Spring term 1 &amp; 2</p> <p>Summer term 1</p>	<p><b>Unit 5: Data Modelling: Learning aims B&amp;C</b></p> <p>Focus here is on teaching curriculum content and carrying out preparatory tasks in order to prepare students to conduct learning aims B&amp;C (a practical activity, involving the design and development of a data model to fulfil identified client requirements), which they complete before the end of Summer term 1 in line with the assessment plan.</p> <p><b>Content covered:</b></p> <p>Design a data model to meet client requirements:</p> <ul style="list-style-type: none"> <li>• Functional specification</li> <li>• Spreadsheet model design</li> <li>• Reviewing and refining data model designs</li> </ul> <p>Develop a data model to meet client requirements:</p> <ul style="list-style-type: none"> <li>• Developing a data model solution</li> <li>• Testing the data model solution</li> <li>• Reviewing and refining the data model solution</li> <li>• Skills, knowledge and behaviours</li> </ul>	<p>Students are familiar with the use of data models but the focus here is on detailed design and planning followed up by development, testing and evaluation.</p> <p><b>Prior learning</b>  This reactivates student knowledge from the BTEC ICT course sat in year 10 and 11 where students were required to develop spreadsheet models for a business context. It also follows the project life cycle which is covered heavily in BTEC ICT and also is a consideration in GCSE Computing Projects based tasks.</p> <p>This also reactivates students skills in spreadsheet modelling and design based tasks developed in ICT units throughout KS3</p>
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Externally assessed strand

Year	Hours per week	Term	Content	Rationale
12	2	Autumn 1 & 2	<p><b>Unit 2: Creating systems to manage information</b></p> <p>Focus here is on teaching curriculum content and carrying out preparatory tasks in order to prepare students to conduct the 5 hour externally set database exam.</p> <p>Content is largely carried out practically slowly building up from simple database tables, queries, forms and reports to the more complex requirements of the specification.</p> <p><b>Content covered:</b></p> <ul style="list-style-type: none"> <li>• Relational database management systems</li> <li>• Manipulating data structures and data in relational databases</li> <li>• Normalisation</li> <li>• Design documentation</li> <li>• Standard methods and techniques to design relational database solutions</li> <li>• Relational database design</li> <li>• Creating a relation database structure</li> <li>• Producing a database solution</li> <li>• Testing and refining the database solution</li> <li>• Database design evaluation</li> <li>• Evaluation of database testing</li> <li>• Evaluation of the database</li> </ul>	<p>Students are familiar with creating databases at KS3 and in KS4 ICT and theory around relational databases and SQL is also covered in GCSE Computing. The focus here is to start by building confidence by re-activating known skills in databases and then to develop these further until students are confident to work on past papers after Christmas.</p> <p><b>Prior learning</b> This reactivates student knowledge from the BTEC ICT course sat in year 10 and 11 where students were required to produce Database solutions for a particular business. The structure of the theory also follows the project life cycle which is taught at KS4 in ICT and for Computing projects.</p> <p>This also reactivates students skills in databases and database querying developed in KS3.</p> <p><b>Students who sat Computing at KS4 from 2021 will also have been exposed to database theory and SQL.</b></p>
12	2	Spring term 1 & 2 Summer term 1	<p><b>Unit 2: Creating systems to manage information</b></p> <p>Past paper tasks (5 hours each)</p> <p>Students will work through past paper tasks in order to prepare them for the externally assessed practical exam.</p>	<p>Having spent the run up to Christmas developing database skills, the focus in the Autumn term is to link this to past paper tasks so that students are familiar with the requirements and structure of the exam in</p>

			<b>This culminates in an external exam in June which is externally assessed.</b>	readiness for sitting the actual exam in June.
12	2	Summer term 2	<p><b>Unit 1: Information Technology Systems</b></p> <p><b>Students will sit the external unit 1 task at the end of year 13, but are freed up in the final term of year 12 to begin learning some of the theory.</b></p> <p><b>Content covered</b></p> <ul style="list-style-type: none"> <li>• Digital devices in IT systems</li> <li>• Digital devices, their functions and use</li> <li>• Peripheral devices and media</li> <li>• Computer software in an IT system</li> <li>• Emerging technologies</li> <li>• Choosing IT systems</li> </ul> <p><b>Students will be exposed to past paper style questions relating to this topic area.</b></p>	<p>Theory on digital devices has been covered before at KS4 and KS3 in ICT. It is therefore a good confidence booster to start with this section of the specification. However, they need to learn how to apply knowledge to a business context.</p> <p><b>Prior Learning</b> Theoretical knowledge is familiar from KS3 and KS4 ICT. Application skills have been used for the Social Media unit in year 12, so students should be familiar with linking to a business context.</p>
13	2	Autumn term 1	<p><b>Unit 1: Information Technology Systems</b></p> <p>Transmitting data: Connectivity Networks Issues relating to transmission of data</p> <p><b>Students will be exposed to past paper style questions relating to this topic area.</b></p>	<p>It is important for students to learn how the features and processes of data transmission affect the use and performance of IT systems.</p> <p><b>Prior learning</b> Theory on transmitting data has been covered before at KS4, particularly in Computing and KS3 in ICT. How to apply knowledge to a business context has been taught at KS4 in ICT and as part of the social media unit.</p> <p>Students will understand the concept of networking as they are able to visualise the school network.</p>
13	2	Autumn term 2	<p><b>Unit 1: Information Technology Systems</b></p> <p>Operating online:</p> <ul style="list-style-type: none"> <li>• Online systems</li> </ul>	<p>It is important for students to learn about the implications for individuals and organisations of using online IT systems and how to deal</p>

			<ul style="list-style-type: none"> <li>• Online communities</li> </ul> <p>Protecting data and information</p> <ul style="list-style-type: none"> <li>• Threats to data, information and systems</li> <li>• Protecting data</li> </ul> <p><b>Students will be exposed to past paper style questions relating to this topic area.</b></p>	<p>with threats as this is something they will encounter and need to deal with in their everyday and working lives.</p> <p><b>Prior learning</b> Theory on protecting data and information has been covered before at KS4, both in Computing and ICT and at KS3 in ICT. Much of the operating online theory will be familiar to students as it has been covered as part of the social media unit</p>
13	2	Spring term 1 & 2	<p><b>Unit 1: Information Technology Systems</b></p> <p><b>Mock exam on aspects of unit 1 already covered.</b></p> <p>Spring term 1 &amp; 2 theory: Impact of IT systems: Online services Impact on organisations Using and manipulating data</p> <p>Issues: Moral and ethical issues Legal issues</p> <p><b>Students will be exposed to past paper style questions relating to this topic area.</b></p>	<p>It is important for students to experience a mock on unit 1, as this will give them exposure to the theory in examined conditions and will help us to identify problems with exam technique and areas which need to be recovered.</p> <p>Theory for spring term 1&amp;2: It is important for students to learn about the uses, issues and implications of IT systems and their impact on individuals and organisations <b>and the legal issues relating to the use of IT systems and the implications for individuals, organisations and wider society.</b></p> <p><b>Prior learning</b> Theory particularly relating to ICT legislation has been covered before at KS4, both in Computing and ICT and at KS3 in ICT.</p>

13	2	Spring term 2, Summer term 1	<p><b>Unit 1: Information Technology Systems</b></p> <p><b>Re-coverage of any topics which exam analysis reveals as needing further clarification.</b></p> <p><b>General revision:</b> Working through full past papers and looking at mark schemes to fully familiarise students with the structure of and requirements of the final exam.</p>	<p>Re-teaching following exams analysis of performance in the mock to clarify any misconceptions.</p> <p>Work on past paper and mark schemes is important as it helps students to develop exam technique and timings and also so that they understand the structure and requirements of the paper.</p>
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**Assessment:**

The course is assessed via 4 units, 3 mandatory and 1 optional.

Pearson BTEC Level 3 National Extended Certificate in Information Technology				
Unit number	Unit title	GLH	Type	How assessed
<b>Mandatory units – learners complete and achieve all units</b>				
<b>1</b>	Information Technology Systems	<b>120</b>	<b>Mandatory and Synoptic</b>	External
<b>2</b>	Creating Systems to Manage Information	<b>90</b>	<b>Mandatory</b>	External
<b>3</b>	Using Social Media in Business	<b>90</b>	<b>Mandatory</b>	Internal
<b>Optional units – learners complete 1 unit</b>				
<b>5</b>	Data Modelling	<b>60</b>	<b>Optional</b>	Internal
<b>6</b>	Website Development	<b>60</b>	<b>Optional</b>	Internal

**Year 12**

We sit one external unit (unit 2) and one internal unit (unit 3) in year 12.

**Year 13**

We sit one external unit (unit 2) and one optional internal unit (unit 5) in year 13.

**Students also sit a mock exam in year 12 and in year 13 to help them to prepare for the external examinations.**

**Resources:**

Course textbook: Pearson REVISE BTEC National Information Technology Revision Guide 3rd edition



### **How does the qualification provide employability skills?**

In the BTEC National units there are opportunities during the teaching and learning phase to give learners practice in developing employability skills in the following three main categories:

- Cognitive and problem-solving skills: use critical thinking, approach non-routine problems applying expert and creative solutions, use systems and technology
- Intrapersonal skills: communicating, working collaboratively, negotiating and influencing, self-presentation
- Interpersonal skills: self-management, adaptability and resilience, self-monitoring and development.

### **How does the qualification provide transferable knowledge and skills for higher education?**

All BTEC Nationals provide transferable knowledge and skills that prepare learners for progression to university. The transferable skills that universities value include:

- The ability to learn independently
- The ability to research actively and methodically
- Being able to give presentations and being active group members.

BTEC learners can also benefit from opportunities for deep learning where they are able to make connections among units and select areas of interest for detailed study. BTEC Nationals provide a vocational context in which learners can develop the knowledge and skills required for particular degree courses, including:

- Reading technical texts
- Effective writing
- Analytical skills
- Creative development
- Preparation for assessment methods used in degrees.

### **Students taking ICT at Ecclesbourne have gone on to study many different areas, including:**

- Software engineering
- Web and multimedia production
- Programming
- Systems analysis
- Hardware and software support
- Network engineering
- Computer games development
- Business Studies