

# BTEC Information Technology

## KS5 Transition Pack

<b>Courses</b>	601/7574/6: AS: Pearson BTEC Level 3 National Certificate in Information Technology
	601/7575/8: A2: Pearson BTEC Level 3 National Extended Certificate in IT

### Introduction

Welcome to the ICT Department and the BTEC ICT course. The step up from GCSE to sixth form courses can seem daunting but don't panic, this transition pack is designed to help you prepare for this new course that you are interested in taking in September.

The pack includes an overview of what you will study during the course, should you join it, together with a series of introductory tasks for you to work through. The tasks are designed to help you get to grips with some of the key terms you will need to know, as well as concepts you will learn about.

The BTEC IT qualification is an ideal course for students who are practically minded and want to learn how to use computers in different situations. The course is designed for learners who are interested in creating IT systems to manage, analyse and share information and how social media can be used to enhance businesses.

The units that you would complete for the full A' Level equivalent are: Unit 1 – Information Technology Systems, Unit 2 – Creating Systems to Manage Information, Unit 3 – Using Social Media in Business and Unit 5 – Data Modelling. If you decided to study the AS equivalent Certificate you would complete Unit 3 and Unit 2 only.

The course requires analytical thinkers, good organisation skills, and students who are willing to work independently to develop their practical skills and IT knowledge. The IT industry develops and updates at a rapid pace and you are expected to use your private study time to stay abreast of current issues and developments.

To access the ICT course in September, you will need to complete the tasks set out in this pack and also meet the course entry requirements, which can be found in the sixth form course listing document. If you have any questions then you can email them to Mr Kirby [nathan.kirby@oatforge.co.uk](mailto:nathan.kirby@oatforge.co.uk)



# BTEC National in Information Technology

## Units and topics that you will study during the first year of the course

Unit	Topics
<b>Unit 3 – Using Social Media In Business</b>	In this unit you will explore the ways in which businesses use social media to promote their products and services. This unit is coursework and will be assessed internally through the completion of three learning aims.
	Explore the impact of social media on the ways in which businesses promote their products and services
	Develop a plan to use social media in a business to meet requirements
	Implement the use of social media in a business
<b>Unit 2 – Creating systems to manage information.</b>	In this unit you will learn how to design, create, test and evaluate a relational database system to manage information. You will also examine the structure of data and its origins, and how an efficient data design follows through to an effective and useful database. This unit is externally assessed through a task that is set and marked by the exam board.
	The purpose and structure of relational database management systems
	Standard methods and techniques to design relational database solutions
	Evaluating a database development project
	Evaluating a database development project

## Units and topics that you will study during the second year of the course

Unit	Topics
<b>Unit 1 – Information Technology Systems.</b>	In this unit you will explore the relationships between hardware and software that form an IT system, and the ways that systems work individually and together, as well as the relationship between the user and the system. You will be assessed through a written examination which is set and marked by the exam board.
	Digital devices in IT systems
	Transmitting data
	Operating online
	Protecting data and information
	Impact of IT systems
	Issues
<b>Unit 5 – Data Modelling</b>	This is the optional unit that we have selected for the national extended certificate. You will learn how data modelling can be used to solve problems and will design and implement a data model to meet client requirements. This unit is internally assessed.
	Investigate data modelling and how it can be used in the decision-making process
	Design a data model to meet client requirements
	Develop a data model to meet client requirements

## BTEC ICT Preparatory Tasks

Please complete each of the tasks set out in the rest of this transition pack and bring your answers and/or findings with you to the first lesson in September if you join the course.

### Task 1 : Glossary

As with all subjects, BTEC IT will introduce you to lots of key terms, many of which are likely to be new to you. In the table below, some of the key terms introduced during the first year of the course are listed. Find definitions of each of the terms. Once you have done this create a glossary containing the terms and their meanings.

The glossary you create can be a reference document to be used later, so make sure it is well presented and clearly set out. You are expected to create a glossary for both Year 12 units.

### Unit 2 – Creating systems to manage information

Database	Relational Database	Database Relationships
Database Table	Composite Key	Data Dictionary
Database Query	Data Type	Referential Integrity
Database form	Data Integrity	Testing
Database Report	Data Consistency	Database Field
Primary Key	Normalisation	Database Management System
Foreign Key	Validation	Macro
Flat file Database	Verification	SQL (Structured Query Language)

### Unit 3 – Using social media in business

Advertise	Keyword Strategy	Sensitive Information
Promote	Planning	Business Requirements
Communicate	Campaign	Online Community
Engage	Comments	Ethical Considerations
Marketing	Negative Comments	Hashtags
Share	Blackmail	Audience Profile
Target Audience	Profile	Interaction
E-Commerce	Search Engine Optimisation	Privacy Settings

### Task 2 : Unit 2: Research Task

Research and produce a written document that identifies and explains the following points.

- Explain the purpose of a database?
- Explain the difference between a flat file and relational database.
- Identify and explain the advantages and disadvantages for using databases.
- Defines what a data type is and includes some examples of them.
- Give at least 3 examples of organisations that might use a database and why they do.
- Identifies 3 different pieces of software that can be used to create a database and explains a little about them.

- Explains why verification and validation is important when entering information in a database.
- Identifies some laws and issues that must be considered when data is stored in a database.

### Task 3: Unit 3: Research Task

In unit 3 you will be looking at ways businesses use social media and creating your own campaign.

We would like you to research and produce a report or presentation that outlines the different ways that a business can use social media.

You will need to do research and ensure that anything that you use is referenced.

The report should include real life examples of business' using social media with how it would help them. For example, the image on the right shows 'Krispy Kreme' promoting their products on a hot day - this would help this business gain custom as it will make potential customers aware of the product they have on offer.

Your report should include instances where marketing campaigns using social media have gone wrong and why they were bad.

You should also consider the different methods that companies use in social media to get noticed.

You should present your work as a written report or presentation that is structured with an introduction, main findings and conclusion. In your conclusion you should discuss if you feel social media is effective in reaching customers.



### Task 4: Unit 3: Using Social Media

Explore the ways in which Tesco and Ed's Diner use social media. State which social media sites are used by each of the businesses and why they may have chosen these specific sites.

Explain how and why using social media will raise their profile and promote their products and services.

Social media is not just useful for businesses. The school has a social media presence. Explain how this presence is used to promote the school.

## Task 5: Unit 1: Drawing Task

Rahim is an animator who works for a company based in a large city-centre office with branches around the country. Rahim travels around the country to meet clients and colleagues. He usually travels by train to work and other locations, and needs to be able to use this time to work and contact clients. During meetings, Rahim needs to present his work to others. He must be able to access and work on the same files when travelling, when in the office or with clients. His animation work involves capturing, storing and manipulating large, high-quality image and animation files. He must be able to export these into different file formats for inclusion in his work and for sharing with others.

Task:

Draw a solution showing how Rahim could combine IT systems to meet all his needs. Your design should include the digital devices and systems he could use and how they will be connected. You could show what information will be passed between the systems and how they might be connected.

Hint: Remember to include devices such as laptops and phones. Keywords such as mobile data, Wi-Fi and cloud storage may also help you in your answer.

## Task 5: Unit 1: System Components

Identify, research and describe all of the internal components in a computer system. You could present your work as an annotated diagram. As a minimum you should include case, CPU, RAM, HDD, optical drives and Motherboard. You should clearly explain what each component does and how you know a good one from a bad one.

## Unit 3: Extension Work

You could complete this free Google course on the Fundamentals of Digital Marketing. You will get a certificate at the end which can be used to evidence your completion of the course. This would be an excellent way to show universities and future employers how you use your time to develop your skills.

<b>Course Title</b>	Fundamentals of Digital Marketing
<b>Course Link</b>	<a href="https://learndigital.withgoogle.com/digitalgarage/course/digital-marketing">https://learndigital.withgoogle.com/digitalgarage/course/digital-marketing</a>

Future learn are also offering a free course on how to create a social media campaign. The details for this are below.

<b>Course Title</b>	Create a social media campaign
<b>Course Link</b>	<a href="https://www.futurelearn.com/courses/create-a-social-media-marketing-campaign">https://www.futurelearn.com/courses/create-a-social-media-marketing-campaign</a>

## Unit 2: Extension Work

If you have Microsoft Access installed at home then you can email Mr Kirby for some tutorial guides on how to build and develop a database.