Hedingham School & Sixth Form
Key Stage 5
BTEC Student Handbook

BTEC Level 3 Subsidiary Diploma in Information Technology

Qualification Number: 500/9148/7

BTEC Level 3 Subsidiary Diploma in Information Technology (DWA77)

The Level 3 Subsidiary Diploma is studied over two years and is the equivalent of an A level. It carries UCAS points to support entry to university. The Subsidiary Diploma is made up of six equally weighted units.
You will study three of them in year 12 and three of them in year 13.

Students who take this course for only one year will take the three year 12 units and, if successful, will gain a BTEC Level 3 Certificate in Information Technology. (The equivalent of an AS)

Units

All of the six units are assessed by coursework. There are no examinations.

Unit	Year 12	Code
1	Communication & Employability Skills for IT	F/601/7233
2	Computer Systems	M/601/7261
28	Website Production	Y/601/6623

Unit	Year 13	Code
16	Procedural Programming	L/601/7283
18	Database Design	J/601/6617
42	Spreadsheet Modelling	Y/601/6637

Points.
As you complete each unit your work will be assessed and you will gain a grade for each of the units.

Each grade is worth a certain number of points. These points are added together to determine the final grade.

This means that if you find one of the units more suited to your style of working then you can do well and this may offset a unit that you find more difficult.

Points for **each unit:**

U	Pass	Merit	Distinction
0	70	80	90
Equivalent to A level grades:	E-D	C	B-A

Final Grade

If a student successfully completes all **six units** over the two years they claim a **BTEC Level 3 Subsidiary Diploma** in Information Technology.

The **BTEC Level 3 Subsidiary Diploma** has 540 points available from the six units taken over the two years. The total number of points that a student achieves will determine their final grade.

These are the determining points range for the final grade;

Points	Grade	Possible combination of unit grades
420-459	Pass	PPPPPP
460-499	Merit	PPMMMM
500-519	Distinction	MMMMDD
520+	Distinction Plus	MMDDDD

- You will notice that you would not need to gain Merit in <u>all</u> of the units to gain a Merit in the final grade.
- To gain Distinction in the final grade you would not need to achieve Distinction in all of the units.
- Distinction Plus is equivalent to grade A – A* at A level. You would not need to achieve Distinction in <u>all</u> of the units to gain Distinction Plus in the final grade.

If a student successfully completes **three units** and claims a **BTEC level 3 Certificate** in Information Technology, then these are the determining points ranges;

Points	Grade	Possible combination of unit grades
210-229	Pass	PPP
230-249	Merit	MMP
250-259	Distinction	DMM
260+	Distinction Plus	DDM

Hand in dates

You will have set hand in dates for your work which you MUST meet.
Your work will be assessed and if appropriate you may be offered an opportunity to improve your work. This is called a 'Referral'.

Only the Lead teacher for the subject can allow you a referral. In this subject the Lead teacher is Mr. Daniels.
Failure to meet the hand in date for your work will mean that you cannot have a referral for that piece of work. (Exceptions would apply for extenuating circumstances.)

This could lead to you failing the whole course as you must pass all of the units to be successful and claim a final grade.

Making your work your own

It is vital that the coursework that you hand in is your own work. However, you may use information from other places or other people to help you present ideas. You may interview someone and include their information or you may find an interesting piece of information in a leaflet or on the internet.

If you use a diagram or a piece of written text as part of your work then you MUST declare where this came from. If you don't, then you are suggesting that this is your work, which would not be true.

If you are including a quotation from a book, magazine, person, internet or other source, you should indent the quotation and italicize the text. Put the link under this text and then explain the quotation in your own words. The quotation alone is not enough!

Here is an example;
> *One of the ingredients in tobacco is a mood-altering drug called nicotine. Nicotine reaches your brain in mere seconds. It's a central nervous system stimulant, so it makes you feel more energized for a little while. As that effect subsides, you feel tired and crave more. Nicotine is habit forming.*
> ***http://www.healthline.com/health/smoking/effects-on-body***

Nicotine is inhaled when you smoke cigarettes. It makes you feel as if you have a lot of energy, but this feeling only lasts for a short while. Afterwards you feel more tired and crave more nicotine so that you develop a tobacco smoking habit.

If you are including diagrams in your work, these too need to be referenced, showing where you got that diagram from. You would then write about what this diagram shows.

A list of all the references you have used should be included as a list at the end of your work as a bibliography. It is best to make that list as you go.

Plagiarism

Plagiarism involves taking someone else's words, thoughts or ideas and trying to pass them off as your own. **It is a form of cheating which is taken very seriously.**

Penalties for breaking the regulations
If your work is submitted and it is discovered that you have broken the regulations, one of the following penalties will be applied:
- The piece of work will be awarded zero marks
- You will be disqualified from that unit for the examination series in question
- You will be disqualified from the whole subject for that examination series
- You will be disqualified from all subjects and barred from entering again for a period of time.

REMEMBER – IT IS YOUR QUALIFICATION SO IT NEEDS TO BE YOUR OWN WORK.

Units Studies in Year 12

Unit 1 - Communication & Employability Skills for IT

The aim of this unit is to ensure that you understand both the personal attributes valued by employers and the principles of communicating effectively whist developing effective communication skills and addressing your own personal development needs.

Non-technical skills and attitudes, known as soft skills, are key to employability as well as the technical skills and knowledge required for specific jobs in IT. Soft skills are those skills relating to an individual's ability to communicate and work effectively with others, to use appropriate language, be dependable and conscientious, and to generally behave in an acceptable manner in the workplace. Soft skills complement hard skills, which are the knowledge, understanding and technical skills required to do a job.

In this unit learners will come to appreciate the soft skills they need to develop to become effective employees. Learners will identify and consider their own soft skills and, through practice, improve these skills. Communication skills are key to success in any sector but are particularly important in highly technical sectors such as IT where the language used can become full of jargon. It is important that learners are able to communicate with non-technical staff and understand when different types and vehicles of communication are appropriate.

IT provides specific software packages and advanced tools that can be used to improve the effectiveness of communications. Through this unit learners will be able to improve their general communication skills and ensure that they understand how to exploit specific application packages and tools.
All individuals, whether learners or employees, must accept the need for continual self-development to maintain their effectiveness. For this reason, learning outcome 4 involves the use of personal development plans which can be used to capture and track training needs, and the accumulation of new skills and knowledge.

Unit 2 - Computer Systems

The aim of this unit is to enable you to understand the components of computer systems and develop the skills needed to recommend appropriate systems for business purposes and set up and maintain computer systems.

At some stage most IT professionals will have to set up and customise a computer system or systems. To do so effectively they will need to understand the components that make up computer systems. The operating system interacts with the hardware and software components in order to make a functioning machine.
In this unit learners will consider a range of hardware and come to understand the technical specifications of components. There are a number of different operating systems, despite the dominance of the Microsoft operating system, and learners will explore at least one other. In terms of software, the operating system itself often provides utility programs that assist the user in managing the machine. Other third party software utility programs such as virus checkers are also used extensively. This unit considers both types of utility software. IT professionals will often be asked to recommend systems for varied user needs. There are many different manufacturers of computer systems and each manufacturer produces a wide range of models with different specifications. Deciding which particular model is appropriate for a given situation depends on a variety of factors. These factors are explored in this unit so that learners can make informed choices when recommending computer systems.

IT professionals also need to develop the skills required to install and configure computer systems. A large part of this unit will involve practical work in installing hardware components and software, configuring systems to meet specific requirements and testing to ensure a fully functioning system is produced.

Unit 28 – Website Production

The aim of this unit is to enable a learner to understand web architecture and the factors that affect its performance and to be able to design and create interactive websites.

The number of websites on the worldwide web has increased dramatically and competition is very high. This means that designers must use increasingly sophisticated techniques to capture interest, as well as ensuring that an appropriate company image is presented. Usability issues, such as navigation methods, must be considered carefully. A poorly-designed structure could result in users becoming confused or frustrated and navigating away from the website.

The need for good web designers and developers continues to grow as more and more companies realise they must develop a web presence and keep it maintained and updated. This unit starts by exploring web architecture and the factors that influence website performance. Learners investigate the web development process from identification of need, design, build, and test through to review.

Units Studies in Year 13

Unit 16 – Procedural Programming

This unit aims to enable you to develop the skills and understanding required to design and develop procedural programming applications.

Irrespective of framework or delivery platform, the development of procedural code is still at the core of many commercial applications development projects. Event driven systems and object oriented platforms all use procedural code for the critical command content of their objects, events and listeners.

This unit enables you to become familiar with the underpinning concepts of procedural programming and subsequently to develop particular skills in a procedural programming language. The unit starts by looking at the features of procedural programming, explores the tools and techniques used in their development and takes learners through design and program development. You will use a structured approach to the design and development of applications, ensuring the solution is well documented and thoroughly tested against the original user requirement.

Procedural programming languages include Python, Pascal, C, Cobol, Fortran and many others. You will use Python.

Unit 18 – Database Development

The aim of this unit is to enable learners to understand the features of relational databases and to develop the skills necessary to design, create, populate and test a relational database incorporating advanced features.

Database software is one of the most commonly used application packages in business. Many jobs involve the use of databases and for this reason employees with database skills are valued. The advantages of using a relational database are extensive, including significantly reduced data storage requirements, improved record manipulation and faster access to records. As with spreadsheets, data mining software can make use of database files to interrogate records and look for trends or unusual events.

Most organisations use databases in some way to store records, for example customer information, supplier information, employee details and financial information. These records can be searched, sorted, ordered, and cross-referenced using relational databases. Using a simplified chart tool, graphs and charts can also be created and embedded in reports. Importing and exporting data to and from databases will be practiced in this unit.

To ensure that relational databases have integrity, validity and efficiency, designing the database prior to implementation is important. Failure to do this may result in a poor product. Learners will consider the validation and verification methods that can be implemented to ensure that the data stored in a database is as accurate as possible. Efficient relational database design is managed through the process of normalisation and learners will be using normalisation techniques to develop efficient and effective relationships between entities.

In this unit learners will come to understand the features and functions of database software and use advanced features to design and implement fully-functioning relational databases to specified user requirements. This unit links well with Unit 11: Systems Analysis and Design.

Good Luck! We hope you all do really well.

The BTEC staff at Hedingham School.