St Robert of Newminster RC School
and Sixth Form College

BTEC Student Handbook

NQF/QCF Courses 2016-17

A useful guide to new BTEC students

Student Name _____

Course Title _____

Date _____

August 2016

Introduction

Welcome to the BTEC Handbook!

This has been produced by St Robert of Newminster RC School & Sixth Form College staff to support all students who are studying a BTEC qualification at Key Stage 4 or 5.

It is designed to help you understand what is involved in your BTEC course and provide you with information to help you be successful in completing it. It will also include a number of important links to other documents and websites where you will find further useful information.

It is important to remember however that your teachers and course leaders remain the best people to answer any queries you have if you are not able to find the answer within this handbook.

Good luck with your chosen BTEC and we hope you enjoy the course(s) you are studying!

What we expect of you

Your BTEC course will be different in some ways to the rest of your subjects, although it will be the same in other ways.

- **We expect good attendance at and punctuality to all lessons.**
- We expect you to be able to follow the school behaviour expectations.
- We expect you to contribute positively in lessons.
- We expect you at times to work outside of lessons.
- We expect you to ask for help if you are confused or if you are struggling to complete work to a deadline you have been set.
- We expect you to hand in work that is organised and neatly presented and can be easily identified as your own work.

What you can expect from us

All staff who teach BTEC courses will do their very best to provide you with high quality teaching and learning experiences.

They will also make the experience as relevant to the particular sector you are studying as possible. This will include using links where possible with people and organisations within the relevant industry.

All staff will support your progress in class and where possible will provide additional support outside of lesson time.

Any coursework that you submit will be marked and assessed within a reasonable time. Staff may also give you the opportunity to improve and upgrade your work if you are keen to do so or if your work has not yet achieved a Pass grade.

All BTEC Students will be registered at EDEXCEL by the school examination officer.

All BTEC final grades will be released to students on GCSE and GCE results days.

Course structure and assessment plans

All BTEC courses are based on assignments, tests or exams. You will complete a number of units throughout your studies. Each one is part of the overall qualification and you will be required to complete all of them to pass the course.

EXAMPLES:

For a BTEC Level 2 First Award *in* ***either Sport, Applied Science, Engineering or ICT you will study 2 mandatory units followed by a number of additional units totalling 120 hours of learning.***

*These courses now consist of externally assessed units of study.

For a BTEC Level 3 National Diploma* in Engineering you will student 10 units over two years, totalling 720 hours of Learning. This course is the equivalent of 2 full A Levels.

**These courses now consist of externally set tasks as well as external examinations.

Each BTEC course will usually be taught by a specialist subject teacher.

Each unit will be based on a different topic related to the course. The detail of each unit can be found in the course specification. There is a link to the different specifications later in this handbook. Subject teachers can provide a more detailed overview of how your units of study will be assessed.

Each course is organised at the start of the year so that there is a clear order to the units that you complete. Each BTEC course is unique, therefore Course Leaders will outline this to you.

Unit structure and Assessment

Most Units are structured the same and will be explained below. A unit is always based on a particular topic or area of the subject. You will not only learn about the topic but you will be expected to produce a project based around the topic.

This is a guide as to how long the unit will take to complete

This is the Unit number and title

Unit 1: The Engineered World

Level: **1 and 2**

Unit type: **Core**

Guided learning hours: **30**

Assessment type: **External**

Unit introduction

What is 'engineering'? Is it using materials and processes to manufacture a single item? Is it applying new technologies to the mass production of well-known products? Or is it implementing methods to reduce waste and improve the sustainability of energy sources? Engineering is all of these things and many more. It affects all aspects of our lives, from the daily use of time-saving appliances to performance materials applied in ways we may never have imagined.

In this unit, you will discover the world of engineering. You will investigate the processes used to manufacture modern products within different engineering sectors. You will also study some of the new developments in materials and engineering technology that have an impact on life today – or will have in the very near future.

Engineers must be aware that products and processes may require the use of scarce resources that could have an impact on the environment. When an engineered product is made, used and disposed of, any waste of energy and environmental damage must be minimised at all stages. Therefore, you will also investigate waste reduction and sustainability issues from an engineering perspective, discovering how engineers can help control and reduce environmental damage.

Learning aims

In this unit you will:

A know about engineering processes used to produce modern engineered products

B know about developments in engineering materials and technologies

C understand how engineering contributes to a sustainable future.

This is a brief summary of what the unit is about

This is the key learning that will take place

Learning aims and unit content

What needs to be learnt
Learning aim A: Know about engineering processes used to produce modern engineered products
Topic A1: Engineering sectors and products Types of products from the following engineering sectors: • aerospace, automotive, communications, electrical/electronic, mechanical, biomedical, chemical. **Topic A2: Mechanical and electrical/electronic engineering processes** Processes including health and safety issues, characteristics, applications and advantages/disadvantages of the following engineering processes: • machining – turning, milling, drilling • forming – casting, forging • fabrication – welding, shearing • electrical/electronic – PCB manufacture, surface mount technology. **Topic A3: Scales of production** Characteristics and advantages/disadvantages of the following scales of production used in engineering manufacture: • one-off/jobbing production • batch production • mass production • continuous production. **Topic A4: Modern production methods** Applications and advantages/disadvantages of the following modern production methods for production/assembly lines: • robots • Computer Numerically Controlled (CNC) machinery.

This outlines the detail of what you will learn for each area of the unit. You will learn about all of the key terms and ideas that are listed here. You may have to include some of this learning in your assignment/project

This outline assessment and grading criteria.

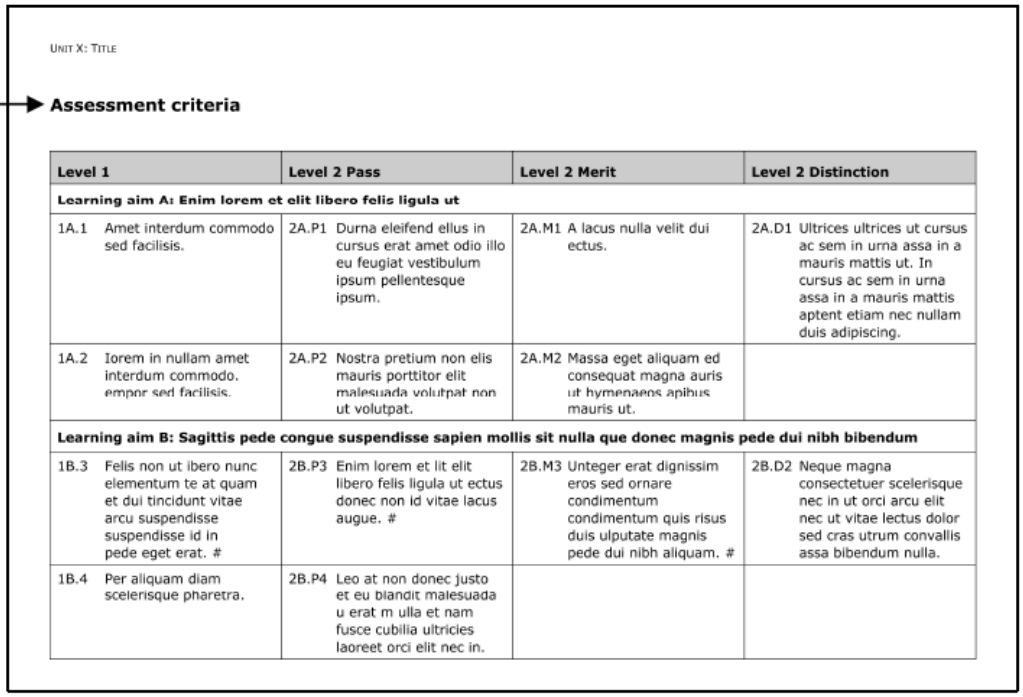
The above information will be used to produce an assignment or set of assignments for the unit. In this assignment you will be given a situation, a role and a set of tasks to complete. These tasks may include written work, online testing, an external examination

research, oral or ICT presentation work, working as an individual or in teams.

The assignment will ask you to produce evidence for each of the statements listed in the Pass criteria column. These statements are linked back to the Unit content explained on the previous page. You must complete all of these to pass the unit.

Assessment criteria

The assessment criteria determine the minimum standard required by the learner to achieve the relevant grade. The learner must provide sufficient and valid evidence to achieve the grade.



UNIT X: TITLE

Assessment criteria

Level 1	Level 2 Pass	Level 2 Merit	Level 2 Distinction
Learning aim A: Enim lorem et elit libero felis ligula ut			
1A.1 Amet interdum commodo sed facilisis.	2A.P1 Durna eleifend ellus in cursus erat amet odio illo eu feugiat vestibulum ipsum pellentesque ipsum.	2A.M1 A lacus nulla velit dui ectus.	2A.D1 Ultrices ultrices ut cursus ac sem in urna assa in a mauris mattis ut. In cursus ac sem in urna assa in a mauris mattis aptent etiam nec nullam duis adipiscing.
1A.2 Iorem in nullam amet interdum commodo. empor sed facilisis.	2A.P2 Nostra pretium non elis mauris porttitor elit malesuada volutpat non ut volutpat.	2A.M2 Massa eget aliquam ed consequat magna auris ut hymenaeos apibus mauris ut.	
Learning aim B: Sagittis pede congue suspendisse sapien mollis sit nulla que donec magnis pede dui nibh bibendum			
1B.3 Felis non ut ibero nunc elementum te at quam et dui tincidunt vitae arcu suspendisse suspendisse id in pede eget erat. #	2B.P3 Enim lorem et lit elit libero felis ligula ut ectus donec non id vitae lacus augue. #	2B.M3 Unteger erat dignissim eros sed ornare condimentum condimentum quis risus duis ulputate magnis pede dui nibh aliquam. #	2B.D2 Neque magna consectetuer scelerisque nec in ut orci arcu elit nec ut vitae lectus dolor sed cras utrum convallis assa bibendum nulla.
1B.4 Per aliquam diam scelerisque pharetra.	2B.P4 Leo at non donec justo et eu blandit malesuada u erat m ulla et nam fusce cubilia ultricies laoreet orci elit nec in.		

Assignment Example

Assignment title	1: Technical Specification Criteria for an Engineered Product
Assessor	

Date issued			
Interim Deadline		Final deadline	
Duration (approx)	2 hours		

Qualification suite covered	BTEC Level 1/Level 2 First Award in Engineering BTEC Level 1/Level 2 First Certificate in Engineering BTEC Level 1/Level 2 First Extended Certificate in Engineering BTEC Level 1/Level 2 First Diploma in Engineering
Units covered	Unit 2: Investigating an Engineered Product
Learning aims covered	Learning aim A: Understand the performance requirements of an engineered product

Scenario	A local engineering company has asked you/your group to investigate an appropriate engineered product and to identify, outline and explain: • why it is shaped as it is • what its function is – whether it works • what would make users choose the product and why • the technical attributes that the product has that make it fit for purpose. The product you select must have a minimum of two different components. *[Or]* The product you have been provided with has a minimum of two different components. *[delete as appropriate]*

Task 1	**Technical specification for an engineered product** Analyse the engineered product you have been given/selected *[delete as appropriate]* and then produce a written technical specification for the engineered product. Your technical specification should include information under the following headings: <u>Basic</u> • Form • Function • User requirements <u>Advanced</u> • Performance requirements • Material and component requirements • Ease of manufacture • Ease of maintenance • Legal and safety requirements
Evidence you must produce for this task	Written report (one side of A3) You may find it helpful to take photographs of the engineered product which you can then annotate/refer to in your report.

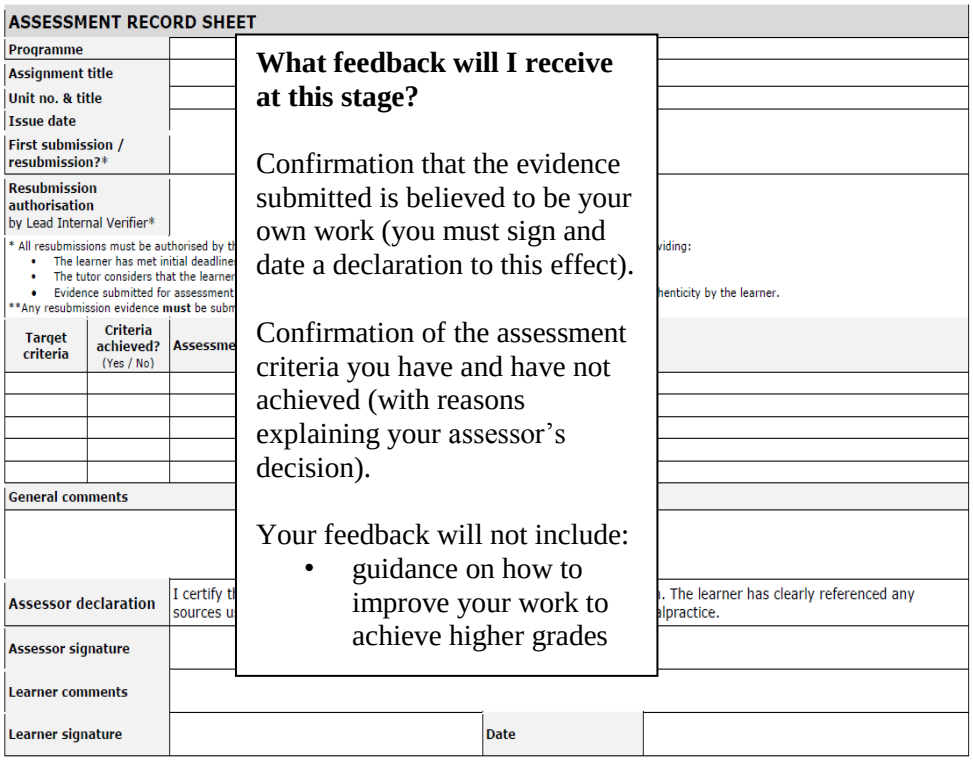
Criteria covered by this task:		
To achieve the criteria you must show that you are able to:	Unit	Criterion reference
Outline relevant basic and advanced specification criteria for an engineered product.	2	2A.P1
Explain the importance of basic and advanced specification criteria for an engineered product.	2	2A.M1

Sources of information	**Textbooks** Clarke, S., Darbyshire, A., Goulden, S., Hallgarth, C. and Watkins, N. (2012) *BTEC First Engineering Student Book*, Pearson Education, 978-1-44690-243-1 Godfrey, N. and Wallis, S. (2004) *Engineering GCSE*, Cheltenham: Nelson Thornes, 978-0-74878-551-3 Tooley, M. (2010) *BTEC First Engineering* 2nd Edition, Oxford: Newnes, 978-1-85617-685-9 Tooley, M., Deacon, M. and O'Dwyer, N. (2008) *Engineering Level 2 Higher Diploma*, London: Edexcel, 978-0-43575-620-8 Tooley, M. (2002) *Engineering GCSE*, Oxford: Newnes, 978-0-75066-576-6 Wallis, S., Godfrey, N., Carey, A., Peacock, R., Casey, M. and King, A. (2010) *BTEC First Engineering*, London: Hodder Education, 978-1-44411-052-4 **Websites** http://www.technologystudent.com http://www.technologystudent.com/designpro/spec1.htm http://dandtforschool.webs.com/A%20Level/GP%20AS%20Product%20Investigation-3%20Pin%20Plug.pdf **Other sources** • Refer to the product's operating instruction booklet to identify the features or use of the product. • Identify the manufacturer of the product, log on to their website, and research the product's construction, standards met, etc. ***Note to Assessors:*** ***We're committed to ensuring that teachers and students have a choice of resources to support their teaching and study.*** ***We would encourage you to use relevant resources for your local area such as local employers, newspapers and council websites.*** ***A range of publications, from a number of publishers, is available to support delivery and training for all Edexcel and BTEC qualifications, so students and teachers can select those that best suit their needs.*** ***Please find above some examples of textbooks. Further useful resources may be found at http://www.edexcel.com/resources/Pages/default.aspx.***

Candidates are expected to attempt all assessment criteria provided. (P1 and M1 in the example above)

Assessment Feedback

During your submission, all your work is assessed internally by your teachers. They will feedback to you whether or not you have met each assessment criteria.



ASSESSMENT RECORD SHEET			
Programme			
Assignment title			
Unit no. & title			
Issue date			
First submission / resubmission?*			
Resubmission authorisation by Lead Internal Verifier*			
* All resubmissions must be authorised by th • The learner has met initial deadline • The tutor considers that the learner • Evidence submitted for assessment **Any resubmission evidence **must** be subm			viding: henticity by the learner.
Target criteria	Criteria achieved? (Yes / No)	Assessme	
General comments			
Assessor declaration	I certify th sources u		. The learner has clearly referenced any alpractice.
Assessor signature			
Learner comments			
Learner signature		Date	

What feedback will I receive at this stage?

Confirmation that the evidence submitted is believed to be your own work (you must sign and date a declaration to this effect).

Confirmation of the assessment criteria you have and have not achieved (with reasons explaining your assessor's decision).

Your feedback will not include:

- guidance on how to improve your work to achieve higher grades

No final assessment decision will be provided to you at this point.

Assessment Feedback

After your final submission (if granted) you will be provided with the final assessment decision.

Resubmission of Work

Your assessor may decide that you will be allowed a resubmission of your work, but only:

- If you have met all the initial deadlines or agreed extensions.
- Your teacher feels you will be able to provide improved evidence without further specific guidance.
- The assessor has confirmed your work was your own.

Retakes (Key Stage 5 Only)

Under exceptional circumstances, such as an illness or absence, you may be allowed to 'retake' the PASS criteria on an assignment, this will normally take place towards the end of an academic year.

Target Setting

The school will set you a target grade for the BTEC course you are studying. This will help you to self-assess your progress throughout each unit of work. You may be asked to improve your work to try to achieve your target grade.

Remember that your final BTEC grade of Pass, Merit or Distinction is based on different pieces of coursework so it is important that you do your best on every one.

As well as getting specific feedback on your coursework after you have handed it in and it has been marked, you will also receive some more general targets when your target grade is set near the start of each Unit.

Internal Verification

All the assignment work that you complete is marked by your teachers. However to make sure that it is being marked correctly and consistently across all students some of the work is then checked by other teachers in the department.

This process is known as Internal Verification. This is the system used to ensure that the correct standards are being met by you and by the teachers assessing it.

During the course of the year some samples of work may also be sent to someone outside of the school who will also check the work and the assessment carried out in school. This is known as External Verification and is again another quality check.

These processes should make no differences to you and your work and you should continue to work hard to meet deadlines and produce the work you have been asked to. If you have any concerns about the decision that you teacher has made when marking and assessing your work then you should refer to the Appeals Policy, details of which are included in the Policies section of this Handbook.

Grading

At the end of the course you will receive an overall grade based on all the units you have completed. This will take into account the individual scores you achieved for each unit.

Different systems are used to work out the overall grade for BTEC courses.

For a BTEC level 2 First Award

To calculate the overall grade you must achieve the following points scores:-

Calculation of qualification grade

Award (120 GLH)	
Grade	**Minimum points required**
U	0
Level 1	24
Level 2 Pass	48
Level 2 Merit	66
Level 2 Distinction	84
Level 2 Distinction*	90

Points available for unit size and grades

The table below shows the **number of points scored per 10 guided learning hours** at each grade.

Points per grade per 10 guided learning hours				
Unclassified	**Level 1**	**Level 2 Pass**	**Level 2 Merit**	**Level 2 Distinction**
0	2	4	6	8

**** Please note: most units are 30 GLH. ****

***** <u>You must obtain at least 24 points in the core units to obtain a level 2 qualification</u> *****

Example 1: Achievement of an Award with a Level 2 Merit grade

		GLH	Weighting (GLH/10)	Grade	Grade points	Points per unit (weighting × grade points)
Unit 1	Core unit	30	3	Level 2 Merit	6	18
Unit 2	Core unit	30	3	Level 2 Pass	4	12
Unit 3	Optional unit	30	3	Level 2 Merit	6	18
Unit 4	Optional unit	30	3	Level 2 Merit	6	18
	Qualification grade totals	**120**	**12**	**Level 2 Merit**		**66**

The learner has more than sufficient points across the core units to be considered for a Level 2.

The learner has sufficient points for a Level 2 Merit grade.

Example 2: Achievement of an Award with a Level 2 Pass grade

		GLH	Weighting (GLH/10)	Grade	Grade points	Points per unit (weighting × grade points)
Unit 1	Core unit	30	3	Level 2 Merit	6	18
Unit 2	Core unit	30	3	Level 1	2	6
Unit 3	Optional unit	30	3	Level 2 Merit	6	18
Unit 4	Optional unit	30	3	Level 1	2	6
	Qualification grade totals	**120**	**12**	**Level 2 Pass**		**48**

The learner has sufficient points across the core units to be considered for a Level 2.

The learner has sufficient points for a Level 2 Pass grade.

Example 3: Achievement of an Award at Level 1 but a Level 2 Pass grade points total

		GLH	Weighting (GLH/10)	Grade	Grade points	Points per unit (weighting × grade points)
Unit 1	Core unit	30	3	Level 1	2	6
Unit 2	Core unit	30	3	Level 1	2	6
Unit 3	Optional unit	30	3	Level 2 Merit	6	18
Unit 4	Optional unit	30	3	Level 2 Merit	6	18
	Qualification grade totals	**120**	**12**	**Level 1**		**48**

The learner has not achieved sufficient points across the core units to achieve a Level 2 but has sufficient points to be considered for a Level 1.

Although the learner has gained enough points overall for a Level 2, they will get a Level 1 qualification as they did not achieve sufficient points across the core units.

For a BTEC level 3 National Diploma / Sub Diploma

	BTEC Level 3 National Qualifications			
	Certificate	Subsidiary Diploma	Diploma	Extended Diploma
Previous name	this is new	Award	Certificate	Diploma
Credits (minimum)	30	60	120	180
Guided learning hours (GLH)	180	360	720	1080
Broad equivalence	1 AS Level	1 A Level	2 A Levels	3 A Levels

The table below helps you calculate your total points for each unit. (Remember some units are worth different numbers of credits)

The table below shows the number of points scored per credit at the unit level and grade

Unit QCF level	Points per credit		
	Pass	Merit	Distinction
Level 2	5	6	7
Level 3	7	8	9
Level 4	9	10	11

The table below provides the boundaries for each overall grade decision.

BTEC Level 3 Subsidiary Diploma

Points	Grade	
420-459	Pass	P
460-499	Merit	M
500-519	Distinction	D
520 and above	Distinction*	D*

BTEC Level 3 90-credit Diploma

Points	Grade
630-659	PP
660-689	MP
690-719	MM
720-749	DM
750-769	DD
770-789	D*D
790 and above	D*D*

When you have completed your Level 3 BTEC course the following chart will help you to understand your achievement.
(The BTEC National Diploma course counts as double)

Grading information: The specified grade threshold is based on the following UCAS Tariff Points equivalencies:

UCAS Tariff Points:	**140**	**120**	**100**	**80**	**60**	**40**
A Level	A*	A	B	C	D	E
BTEC National	D*	D	-	M	-	P

Evaluation/Feedback

Throughout the course you have the opportunity to comment on how the course is going for you. You might want to comment in general or about something more specific. Remember this is about the course and the content of the course not how your teacher has dealt

with your behaviour. Any comments you make will help us to improve how we run the course for you.

This can happen in any of three ways

1. You can speak to you teachers during lessons or at any other time outside of lessons about your work and your progress.

2. You can make a written comment on the Assessment Feedback Sheet (explained in the Assessment Feedback section) that your teacher completes when they return marked work to you.

3. You can complete a student voice questionnaire at the end of the course. Here you can write a more detailed comment about the work you have produced, the learning experiences you have had, or how you have progressed in a particular unit of the course.

Policies

There a number of important policies that exists to help all BTEC courses to run successfully. The most important ones have been written for the school specifically and there are some produced by Edexcel who manage BTECs across the UK.

All policies are available for you to read either on the school Website or on the Edexcel website. It is important that you read the main ones and that you ask you teachers and course leaders if there is anything you do not understand.

Key Policies

1. ***Quality Assurance*** – the key parts of this document are to do with how work is assessed and graded, how the marking is completed by teachers, how it is monitored and checked, how student work is stored, and how student progress is monitored throughout the year.

   Where can it be found?
   Student resources, BTEC General BTEC Policies, Quality Assurance

2. ***Re-submissions*** – this deals with work that you have submitted for marking more than once. There may be limits on what grade you can achieve for a piece of work once it has been re-submitted a few times, particularly if you are trying to achieve a Merit or Distinction.

   Where can it be found?

   Student resources, BTEC General BTEC Policies, Quality Assurance

3. ***Appeals*** – this document explains what you should do if you feel that you have been treated unfairly at any stage during the course. This policy relates directly to your BTEC work specifically. For example you would need to refer to this policy if you did not agree with the mark you had been given for a piece of BTEC work.

   Where can it be found?

   Student resources, BTEC General BTEC Policies, Quality Assurance

4. ***Equal Opportunities*** – this document explains how the school and Edexcel make sure that everyone receives the same opportunity on every BTEC course.

   Where can it be found?

Student resources, BTEC General BTEC Policies, Quality Assurance

5. ***Malpractice*** – this document explains what would happen if a student is discovered to have cheated or copied work from someone or somewhere else and is passing it off as their own. Clearly this is a very serious issue and will not be tolerated by the school or by the Edexcel examination board.

   Where can it be found?

   Student resources, BTEC General BTEC Policies, Quality Assurance

6. ***Health and Safety Information***– this document explains how the school recognises and accepts its responsibility to provide a safe and healthy working and learning environment for staff, pupils and visitors.

   Where can it be found?
   Student resources, BTEC General BTEC Policies, Quality Assurance

Key resources-useful links

School website	This contains all the useful documents that you might need to use or may need to read. This includes • Policy documents
http://www.edexcel.com	This is where you can find all the important information about all current BTEC First courses. Most useful for students are the specifications for each BTEC giving detail on all the units.