



# **BTEC Student Handbook**

Course title

Pearson BTEC Level 3 National Extended Certificate in Engineering

Pearson BTEC Level 3 National Diploma in Engineering

Pearson BTEC Level 3 National Extended Diploma in Engineering

### **Level 3 BTEC Engineering**

This document contains the new rules and regulations regarding deadlines in BTEC courses at the WMG Academy for Young Engineers. This Document outlines how the (NQF) BTEC Level 3 Extended Diploma in Engineering, the Level 3 National Diploma in Engineering and the Level 3 National Extended Certificate in Engineering will be assessed and the rules, you must follow in order to be awarded qualifications. The WMG Academy for Young Engineers will be expected to comply with these rules. Further information about the course will be given during your lessons

#### **Introducing the Staff:**

##### **Lead for Engineering: Mr J Kirwan**

Mr Kirwan is responsible for all Engineering courses within the WMG Academy, Solihull. If you have any concerns that cannot be answered by another member of staff, then please see him.

##### **Lead Verifier: Mr R Hardwick.**

Mr R Hardwick is responsible for the overall quality of the course and will be verifying the course for you. Staff will liaise with Mr R Hardwick and if you have an appeal that reaches stage 2, Mr R Hardwick will respond.

##### **Course tutors:**

You will be studying a variety of units and these will be led by different tutors. They will tell you which units they are responsible for the assessment dates that you need to adhere too.

Mr Kirwan	Mr Bain	S.Light
Mr Sephton	Mr Naeem	P.MCcoy
Miss Leney	Mr Naeem	G Odogwu
Mrs Carey	Mrs Sephton	
Mr Evans	Mr Patchel	
Mr R Hardwick	Mr A Harrison	

##### **Technicians:**

The technicians will provide support, guidance and instruction in the workshop.

Mr Parry

Mr Standbridge

Miss Machin

## BTEC ENGINEERING UNITS:

The BTEC Level 3 Extended Diploma [1080 glh] is equivalent in size to 3 A levels. The BTEC Level 3 National Diploma [720 glh] is equivalent in size to 2 A levels. The BTEC Level 3 National Extended Certificate [360 glh] is equivalent in size to 1 A level. All units have a point's value and to achieve the overall qualification you must have studied and submitted work for units totalling either 1080, 720 or 360 guided learning hours.

If you decide to leave during the course, you will receive unit accreditation or if you have completed the right combination of units and credits you could be awarded a smaller qualification. This will need to be discussed on an individual basis with Mr Kirwan.

Below are the units you will be following to gain your Engineering qualification. You will be given the content and the assessment criteria when you start each unit.

### Mandatory Units

Unit (number and title)	Unit size (GLH)	Extended Certificate (360 GLH)	Diploma (720 GLH)						Extended Diploma (1080 GLH)					
			E	EE	ME	C	MA	AE	E	EE	ME	C	MA	AE
1 Engineering Principles	120	M	M	M	M	M	M	M	M	M	M	M	M	M
2 Delivery of Engineering Processes Safely as a Team	60	M	M	M	M	M	M	M	M	M	M	M	M	M
3 Engineering Product Design and Manufacture	120	M	M	M	M	M	M	M	M	M	M	M	M	M
4 Applied Commercial and Quality Principles in Engineering	60		M	M	M	M	M	M	M	M	M	M	M	M
5 A Specialist Engineering Project	60		M	M	M	M	M	M	M	M	M	M	M	M
6 Microcontroller Systems for Engineers	120								M	M	M	M	M	M
7 Calculus to Solve Engineering Problems	60		O	O	O	O	O	O	M	M	M	M	M	M

### Optional Units (shown in yellow) and units being taught 2019-2020 depending on qualification size

Unit No	Unit Title	12 BTEC 1 360 GLH	12 BTEC 2 720 GLH	12 BTEC 3 1080 GLH	13 BTEC 1 1080 GLH	13 BTEC 2 1080 GLH
1	Engineering Principles					
1	Engineering Principles (retake)					
2	Delivery of Engineering Processes Safely as a Team					
3	Engineering Product design and Manufacture					
4	Applied Commercial and Quality Principles in Engineering					
5	A Specialist Engineering Project					
6	Microcontroller Systems for Engineers					
7	Calculus to solve Engineering Problems					
10	Computer Aided Design in Engineering					
22	Electrical Printed Circuit Board Design and Manufacture					
24	Maintenance of Mechanical Systems					
25	Mechanical Behaviour of Metallic Materials					
28	Dynamic Mechanics					
41	Manufacturing Secondary Machining Processes					
44	Fabrication Manufacturing Processes					
45	Additive Manufacturing Processes					

# Year 12 Assignment Deadlines

Unit No & Title	Assignment	Hand in Date Week commencing	Teacher
Unit 2 - Delivery of Engineering Processes Safely as a Team	Assignment 1	21/10/2019	J Kirwan
Unit 2 - Delivery of Engineering Processes Safely as a Team	Assignment 2	23/03/2020	J Kirwan
Unit 2 - Delivery of Engineering Processes Safely as a Team	Assignment 3	08/06/2020	J Kirwan
Unit 7 Calculus to Solve Engineering Problems	Assignment 1	11/11/2019	S light
Unit 7 Calculus to Solve Engineering Problems	Assignment 2	24/02/2020	S Light
Unit 7 Calculus to Solve Engineering Problems	Assignment 3	15/06/2020	S Light
Unit 8 Further Engineering Mathematics	Assignment 1	04/11/2019	G.Odogwu
Unit 8 Further Engineering Mathematics	Assignment 2	20/01/2020	G.Odogwu
Unit 8 Further Engineering Mathematics	Assignment 3	23/03/2020	G.Odogwu
Unit 10 - Computer Aided Design in Engineering	Assignment 1	25/11/2019	J Kirwan
Unit 10 - Computer Aided Design in Engineering	Assignment 2	09/03/2020	J Kirwan
Unit 10 - Computer Aided Design in Engineering	Assignment 3	08/06/2020	J Kirwan
Unit 22 - Electronic Printed Circuit Board Design and Manufacture	Assignment 1	18/11/2019	R.Evans
Unit 22 - Electronic Printed Circuit Board Design and Manufacture	Assignment 2	02/03/2020	R.Evans
Unit 22 - Electronic Printed Circuit Board Design and Manufacture	Assignment 3	01/06/2020	R.Evans
Unit 31 Thermodynamic Principles and Practice	Assignment 1	25/10/2019	Miss Leney
Unit 31 Thermodynamic Principles and Practice	Assignment 2	06/01/2020	Miss Leney
Unit 31 Thermodynamic Principles and Practice	Assignment 3	02/03/2020	Miss Leney
Unit 38 Website Production to Control Devices	Assignment 1	04/11/2019	Mrs Carey
Unit 38 Website Production to Control Devices	Assignment 2	20/01/2020	Mrs Carey
Unit 38 Website Production to Control Devices	Assignment 3	23/03/2020	Mrs Carey
Unit 44 - Fabrication Manufacturing Processes	Assignment 1	21/10/2019	R.Hardwick
Unit 44 - Fabrication Manufacturing Processes	Assignment 2	23/03/2020	R.Hardwick
Unit 44 - Fabrication Manufacturing Processes	Assignment 3	08/06/2020	R.Hardwick

# Year 13 Assignment Deadlines

**Assignment had in will be the day of the timetabled lesson during the week shown above. All dates are subject to change due to operational reasons of the course.**

Unit No & Title	Assignment	Hand in Date	Teacher
Unit 4 Applied Commercial and Quality Principles in Engineering	Assignment 1	04/11/2019	C Sephton/P McCoy
Unit 4 Applied Commercial and Quality Principles in Engineering	Assignment 2	13/01/2020	C Sephton/P McCoy
Unit 4 Applied Commercial and Quality Principles in Engineering	Assignment 3	30/03/2020	C Sephton/P McCoy
Unit 5 A Specialist Engineering Project	Assignment 1	21/10/2019	Mr Harrison
Unit 5 A Specialist Engineering Project	Assignment 2	13/01/2020	Mr Harrison
Unit 5 A Specialist Engineering Project	Assignment 3	23/03/2020	Mr A Harrison
Unit 10 - Computer Aided Design in Engineering	Assignment 1	25/11/2019	J Kirwan
Unit 10 - Computer Aided Design in Engineering	Assignment 2	09/03/2020	J Kirwan
Unit 10 - Computer Aided Design in Engineering	Assignment 3	08/06/2020	J Kirwan
Unit 28 Dynamic Engineering	Assignment 1	04/11/2019	Miss Leney
Unit 28 Dynamic Engineering	Assignment 2	16/12/2019	Miss Leney
Unit 28 Dynamic Engineering	Assignment 3	02/03/2020	Miss Leney
Unit 24 Maintenance of Mechanical Systems	Assignment 1	21/10/2019	R.Evans/C. Sephton
Unit 24 Maintenance of Mechanical Systems	Assignment 2	13/01/2020	R.Evans/C. Sephton
Unit 24 Maintenance of Mechanical Systems	Assignment 3	30/03/2020	R.Evans/C. Sephton
Unit 25 Mechanical Behaviour of Metallic Materials	Assignment 1	21/10/2019	C Sephton
Unit 25 Mechanical Behaviour of Metallic Materials	Assignment 2	20/01/2020	C Sephton
Unit 25 Mechanical Behaviour of Metallic Materials	Assignment 3	23/03/2020	C Sephton
Unit 38 Website Production to Control Devices	Assignment 1	04/11/2019	C.Carey
Unit 38 Website Production to Control Devices	Assignment 2	20/1/2020	C.Carey
Unit 38 Website Production to Control Devices	Assignment 3	23/3/2020	C.Carey

## **BTEC ASSESSMENT**

Assessment of BTEC units can be either internal or external.

Three of units are externally assessed. Units 1, 3 and 6. The course staff will explain the assessment for these units and prepare you for them.

All other units are internally assessed in this qualification. This means that your tutor will set you assignments and you will complete the work and they will mark this. However this work will be subject to a verification check by BTEC during the academic year.

You need to make sure that you meet deadlines and follow the guidelines and rules given to you about submission of assignments.

### **The Importance of Meeting Deadlines**

Meeting deadlines is one of life's most important skills to acquire. All of us, no matter what job we will do in our life, will need this skill in order to be successful. BTEC courses are designed to reflect and acknowledge real-world employment conditions and, as such, teaching students how to meet deadlines is a top priority. Therefore you must meet the deadlines set for submission

From September 2014, BTEC decided that students will have one submission opportunity only for their work. Once submitted, the work will be graded. It is, therefore, absolutely crucial that you develop good working habits as soon as you begin the course.

### **Resubmission**

If you do not achieve the targeted assessment criteria on the first submission you **may** be given one opportunity to improve and re-submit your work, to gain the pass criteria. However this has to be decided by the Lead Internal Verifier, under the rules laid down by BTEC. Your teacher will need to ask the Lead Internal Verifier to give authorisation to allow you to resubmit your work, but this will NOT be granted automatically.

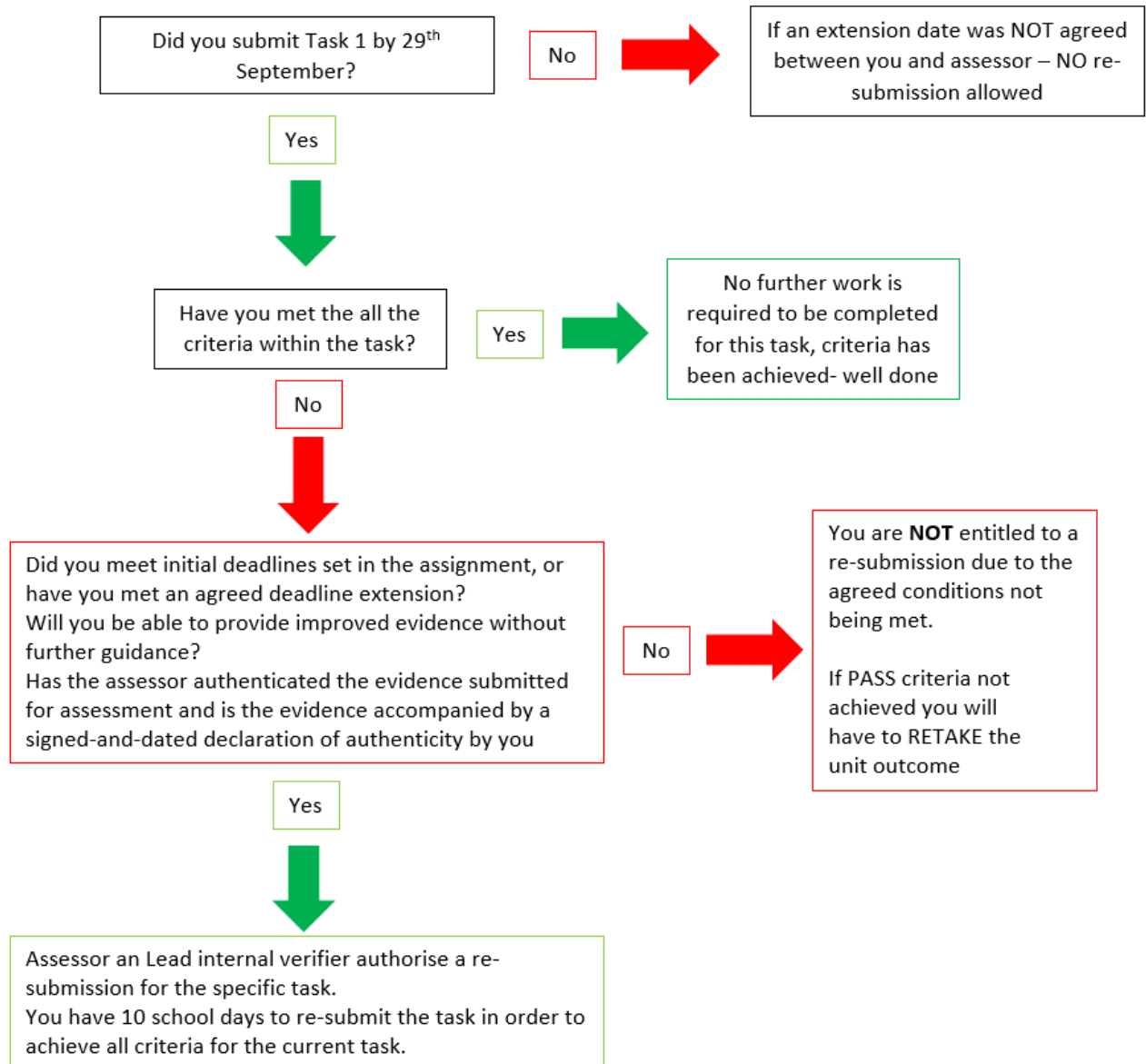
**If** you are allowed to resubmit a piece of work you must improve/add to the original piece without further guidance and must hand this in on the date agreed with your teacher (usually within 10 working days). Also this must not roll over into the next academic year.

However, in exceptional circumstances, there may be a legitimate reason for not being able to meet the deadline. This gives you an opportunity to explain the reasons why you cannot meet the assessment deadline and agree a new deadline date. This must be done at least 5 days before the deadline date wherever possible, not afterwards. The submission diagram on the following page is useful tool to help understand the process.

## Submission Diagram

### Example:

You have been set a deadline for the 29<sup>th</sup> September 20XX- the diagram below will outline the submission and resubmission guidelines:



## **BTEC Internal Assessment rules:**

You must complete a BTEC form with every assignment you hand in. By doing this you are

1. Signing and dating a declaration of authenticity. This means that you are confirming the evidence you are presenting is your own and that you understand the consequences of submitting plagiarised work.
2. Submitting work which has all the evidence for the criteria being examined.

## **Plagiarism**

### **Authenticity of your work**

You are encouraged to read around the units of work that you study and to use a range of resources. Assignments that are thoroughly researched are of a higher quality. You will need to quote from your sources and be able to site examples that illustrate your ideas. Teachers will explain how to quote and reference work in your units. However, if you take another author's work as your own and do not reference it, you will be plagiarising.

The following forms of plagiarism are:

- Copying from texts or journals.
- Copying from other students.
- Wholesale downloading from the internet.

Assignments will be held by teachers until the unit has been completed by all students.

The teaching team will monitor the progress of assignments as they are being undertaken and will discourage plagiarism.

If your teacher feels that you have plagiarised then a meeting will take place to consider the case and the outcome. There is a high chance that you will fail the unit if found plagiarising.

## **Group Work**

Some tasks will be completed in groups. You can work in groups to prepare fully for the assignment but you must complete and submit the work individually.

## **Submission Checklist**

1. Complete the work to the best of your ability using slides through Google Classroom.
2. Ensure that all evidence is inserted into the document i.e. engineering drawings or photos.
3. Press turn it in in Google Classroom only when you are sure you have completed the work to the best of your ability.



## Tracking

Through the use of Progresso, the schools online tracking and reporting system all student progress will be available to students and parents via our online portal.

The report page as shown above will provide the total points achieved to date, and allow students and parents to keep track of what been handed in and marked and if any resubmission is required (based on receiving authorisation by the lead internal verifier) The coding used is as follows S = submitted awaiting marking, P = pass achieved, M = merit achieved, D = distinction achieved, R = Resubmission required, F = Fail of criteria.

Name: Tutor Group: R13.2

Attendance %	100.00
No. Late	-

Units	Total Pass	Total Merit	Total Distinction	Total Criteria	Unit Points
Unit 1: Engineering Principles					12
Unit 2: Delivery of Engineering Processes Safely as a Team	-	-	-	14	
Unit 3: Engineering Product Design and Manufacture					12
Unit 7: Calculus to Solve Engineering Problems	8	-	-	15	6
Unit 22: Electronic Printed Circuit Board Design and Manufacture	2	-	-	15	
Unit 41: Manufacturing Secondary Machining Processes	-	-	-	13	
Unit 44: Fabrication Manufacturing Processes	6	2	-	14	
Totals	20	4	1	Total Points	30

Units	P1	P2	P3	P4	P5	P6	P7	P8	M1	M2	M3	M4	D1	D2	D3	Completion	Pass No.	Merit No.	Distinction No.	Pass	Merit	Distinction	Unit Grade
Unit 2: Delivery of Engineering Processes Safely as a Team	R	R	R	R	S	S	S	S	F	R	S		F	F	S	0.00%	0	0	0	N	N	N	
Unit 7: Calculus to Solve Engineering Problems	P	P	P	P	P	P	P	P								53.33%	8			Y	N	N	Pass
Unit 10: Computer Aided Design in Engineering	R	R	Ab	N/A	P	P			F	N/A	M	M	F	N/A	D	38.46%	2	2	1	N	N	N	
Unit 22: Electronic Printed Circuit Board Design and Manufacture	R	P	P													13.33%	2			N	N	N	
Unit 41: Manufacturing Secondary Machining Processes	R	S	S	S	S	S				S	S	S		S	S	0.00%	0	0	0	N	N	N	
Unit 44: Fabrication Manufacturing Processes	P	P	P	P	P	P				M	M					57.14%	6	2		N	N	N	

## **GLOSSARY OF BTEC TERMS**

<b>This glossary lists the most common BTEC directive terms that are used in unit assessment criteria together with indicative definitions.</b>	
<b>ACCOUNT FOR</b>	Requires more than a description. An explanation of the topic is needed, giving reasons why.
<b>ANALYSE</b>	Break down a complex topic into simpler parts, exploring patterns and explaining significance.
<b>ASSESS</b>	Examine the strengths and weaknesses or opposing viewpoints
<b>COMPARE</b>	Identify and explain the similarities and differences.
<b>CONTRAST</b>	Identify and explain the differences.
<b>DEMONSTRATE</b>	Show awareness and understanding.
<b>DESCRIBE</b>	Give a description of the major features.
<b>DISCUSS</b>	Present and examine clearly the various views on a topic or issue.
<b>EVALUATE</b>	Examine the strengths and weaknesses (just like Assess) and judge the merits of particular perspectives.
<b>EXAMINE</b>	Lay out the essential elements of an issue and investigate in detail.
<b>EXPLAIN</b>	Show clearly knowledge and understanding of a topic.
<b>EXPLORE</b>	Examine or investigate a topic or issue, often in an imaginative way.
<b>IDENTIFY</b>	Pick out and describe the main points.
<b>ILLUSTRATE</b>	Give examples to clarify the argument or answer.
<b>INTERPRET</b>	Clarify or explain the meaning.
<b>INVESTIGATE</b>	A careful and systematic inquiry into a topic or issue.
<b>JUSTIFY</b>	Provide reasons why something is valid.
<b>OUTLINE</b>	Identify the main features.
<b>RESEARCH</b>	Use a variety of sources to establish facts or collect information.
<b>REVIEW</b>	Write a critical assessment.
<b>SIGNIFICANCE</b>	Consequence or importance.
<b>SPECIFY</b>	Identify clearly and definitely.
<b>STATE</b>	Provide information in a brief uncomplicated form.
<b>SUMMARISE</b>	Give an account of the main points.

## BTEC GRADING OF THE QUALIFICATION

Each unit has a specification [what you need to learn] and then assessment criteria. Each unit is graded Pass, Merit or Distinction.

- To get a Pass, you must have meet all the Pass Assessment criteria
- To get a Merit, you must have meet all the Merit Assessment criteria
- To get a Distinction, you must have meet all the Distinction Assessment criteria

The grade you will achieve is based on a sum of the points you are awarded for each unit. The number of points depends on the size of the unit [in GLH]

Points per Internal unit:			
	Pass	Merit	Distinction
60 GLH	6	10	16
90 GLH	9	15	24
Points per External unit:			
	Pass	Merit	Distinction
90 GLH	9	15	24
120 GLH	12	20	32

This adds up to give you a total point score once you have completed all 15 units. As you complete units, you will be able to keep a track of the grade you may get at the end of the course.

Extended Certificate		Diploma		Extended Diploma	
360 GLH		720 GLH		1080 GLH	
Grade	Points threshold	Grade	Points threshold	Grade	Points threshold
U	0	U	0	U	0
P	36	PP	72	PPP	108
		MP	88	MPP	124
				MMP	140
M	52	MM	104	MMM	156
		DM	124	DMM	176
				DDM	196
D	74	DD	144	DDD	216
		D*D	162	D*DD	234
				D*D*D	252
D*	90	D*D*	180	D*D*D*	270

## BTEC APPEALS PROCEDURE – FOR STUDENTS

If you think that an assessment is inaccurate or unfair then you can appeal. This is a formal process, and not to be confused with informally asking your teacher for advice about the assessment decisions or the work. Therefore we need to be formal and have procedures and time constraints.

The only materials that can be considered in an appeal are;

- Your work that you originally handed in
- The task that you were being assessed against
- The relevant Awarding Body assessment criteria
- The written reasons for your appeal.

WMG Academy for Young Engineers has set paper work for this procedure and you will receive a copy of this and the teacher will keep a copy.

**There are THREE stages to the appeals procedure.**

### **Stage 1      Student and Teacher [Assessor]**

**Time scale: Maximum eight working days**

If you disagree with an assessment you must inform the teacher and ask for the assessment decision(s) to be reconsidered.

- You need to be clear about which assessment decisions you are appealing and tell the assessor.
- You may give the teacher written reasons why you think the assessment is inaccurate/unfair.
- You should do this as quickly as possible and within a week of receiving the original assessment decision.
- Your teacher will look again at your work against the task and the Awarding Body Criteria and they will feedback to you within three working days.
- Their feedback will tell you what their decision is and explain how they have reached this decision
- You must inform the teacher if you are:
  - a) Satisfied, in which case the appeal stops.
  - b) Disagree and wish to appeal further to stage 2 Internal Verifier

This decision must be notified to the teacher within two working days.
- All this information will be recorded by the teacher and logged with the Quality Nominee

## **Stage 2      Student and Internal Verifier**

### **Time scale: Maximum eleven working days**

- If you decide to disagree with the stage 1 decision(s) and continues the appeal then teacher will pass on all materials to the internal verifier within 24 hours.
- The internal verifier will reconsider the assessment decisions taking into account
  - All of the materials considered in stage 1 (see above)
  - Your opinion in writing or verbally from a meeting if requested by you (request must be within three working days of the stage informing the teacher that you wish to continue with the appeal)
- Will look again at your work against the task and the Awarding Body Criteria and they will feedback to you within three working days.
- Their feedback will tell you what their decision is and explain how they have reached this decision
- You must inform the teacher if you are:
  - a) Satisfied, in which case the appeal stops.
  - b) Disagree and wish to appeal further to stage 2 Internal Verifier

This decision must be notified to the teacher within two working days.

Within five working days the internal verifier will give the candidate

- a) a new decision or confirmation of the original
- b) a clear written explanation of the assessment decision

The candidate must inform the internal verifier if they are

a) Satisfied, in which case the appeal stops.

b) Disagree and wish to appeal further to stage 3 Senior Management

This decision must be notified to the assessor within two working days.

### **Stage 3      Senior Management**

If the candidate decides to disagree with the stage 2 decision(s) and continues the appeal then internal verifier will pass on all materials to the Quality Nominee within 24 hours

The candidate will be informed when the Quality Nominee will be considering the stage 3 appeal asked if they wish to speak to the Quality Nominee or make a written submission to Quality Nominee before this meeting.

The appeal will be discussed in private at Quality Nominee level and the decision will be given to the candidate in writing within five working days of the meeting. At the same time it will be given to the Internal Verifier.

c) The opinion of another assessor from the centre.

**The centre is responsible for ALL internal assessment decisions and Pearson is not part of the Appeals procedure. Therefore the decision made at Stage 3 is final and cannot be appealed further.**

**Please answer the questions appropriately on Google Classroom to confirm:**

- I have read the BTEC Student handbook and the appeals procedure in detail.
- I know the process, if I wish to appeal against a grade awarded for an assignment and understand the process that must be followed and timescales.