Supplementary notes regarding credit and grading of the BTEC Level 3 Nationals in Aeronautical Engineering

To supplement:

1. Rules of combination for Edexcel BTEC Level 3 National qualifications (page 6)
2. Calculation of the qualification grade (page 12)
3. Annexe G – examples of calculation of qualification grade above pass grade (pages 47-51)

Calculation of the overall grade

Edexcel will automatically calculate the qualification grade for learners when the learner unit grades are submitted by a centre. The overall grade is calculated based on the rules of combination for the qualification, in the following way:

1. The mandatory units are selected and the points allocated and credit applied as in the following table
2. The best graded optional units are then selected, within the rules of combination
3. If the amount of credit needed for the qualification is within a higher graded unit, Edexcel will utilise the proportion of the unit to complete the overall grade calculation. Any surplus credits will be listed on the Notification of Performance.

Credit

The qualification is comprised of units with defined credits (this is estimated as being one-tenth of the learning time needed for an average learner) at an ascribed level. The overall qualification is determined by defined rules of combination as prescribed in the specifications. All units are graded as Pass, Merit and Distinction. Using the grading grid, assignments are created by centres to enable learners to be able to meet the criteria at Pass, Merit or Distinction; to gain an overall unit grade of Merit all the Pass criteria and all the Merit criteria must be achieved, and to achieve the overall grade of Distinction all the Pass, Merit and Distinction criteria must be achieved.

To gain the unit learners must achieve, as a minimum, the Pass grade; the Pass grade is in effect the gaining of the credit for the unit, and this contributes to the overall qualification grade. All units must be passes within the rules of combination to achieve the overall qualification. Please note that – unlike the NQF BTEC Firsts and Nationals where there was compensation (learners passing the qualification by compensating for not passing a unit(s) having gained Merit or Distinction grades in another unit(s)) – all units must be passed to achieve the qualification.

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

Learners who achieve the correct number of points within the ranges shown in the 'qualification grade' tables below will achieve the qualification Pass, Merit, Distinction or Distinction* grades (or combinations of these grades appropriate to the qualification).

BTEC Level 3 Certificate

Points	Grade	
210-229	Pass	P
230-249	Merit	M
250-259	Distinction	D
260 and above	Distinction*	D*

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 Diploma

Points	Grade
840-879	PP
880-919	MP
920-959	MM
960-999	DM
1000-1029	DD
1030-1059	D*D
1060 and above	D*D*

BTEC Level 3 Extended Diploma

Points	Grade
1260-1299	PPP
1300-1339	MPP
1340-1379	MMP
1380-1419	MMM
1420-1459	DMM
1460-1499	DDM
1500-1529	DDD
1530-1559	D*DD
1560-1589	D*D*D
1590 and above	D*D*D*

Important notes regarding Annexe G - examples of calculation of qualification grade above pass grade

Please note that this Annexe within the specification is for illustrative purposes only - the examples given do not apply to the specification for BTEC Level 3 Nationals in Aeronautical Engineering. See below for additional examples which are based on this specification.

The qualification rules of combination are agreed at accreditation, utilising the agreed units and their associated credits. There are only Level 3 units within the structure of the BTEC Nationals in Aeronautical Engineering, and there are no units available at other Levels within the rules of combination.

Meeting Local Needs

In order to meet local needs, centres are permitted to import a prescribed maximum number – as determined within the rules of combination within the specification - of Level 3 units from other QCF accredited BTEC Level 3 Nationals through Edexcel Online.

Example 1 - Achievement of pass pass qualification grade

A learner completing a 120-credit Edexcel BTEC Level 3 Diploma **does not** achieve the points required to gain a merit pass grade.

	Level	Credit	Grade	Grade points	Points per unit = credit x grade
Engineering Project	3	20	Pass	7	20 x 7 = 140
Mathematics for Engineering Technicians	3	10	Pass	7	10 × 7 = 70
Theory of Flight	3	10	Pass	7	10 × 7 = 70
Principles and Applications of Aircraft Mechanical Science	3	10	Merit	8	10 × 8 = 80
Inspection and Repair of Airframe Components and Structures	3	10	Pass	7	10 × 7 = 70
Human Factors in Aircraft Engineering	3	10	Merit	8	10 × 8 = 80
Aircraft Hydraulic Systems	3	10	Pass	7	10 × 7 = 70
Airframe Systems	3	10	Merit	8	10 × 8 = 80
Aircraft Radio and Radar Principles	3	10	Pass	7	10 × 7 = 70
Further Aircraft Electronic Circuits and Avionic Systems	3	20	Pass	7	20 x 7 = 140
Qualification grade totals		**120**	**Pass Pass**		**870**

Example 2 - Achievement of distinction merit qualification grade

A learner completing a 120-credit Edexcel BTEC Level 3 Diploma achieves the points required to gain a distinction merit qualification grade.

	Level	Credit	Grade	Grade points	Points per unit = credit x grade
Engineering Project	3	20	Merit	8	20 × 8 = 160
Mathematics for Engineering Technicians	3	10	Distinction	9	10 × 9 = 90
Theory of Flight	3	10	Distinction	9	10 × 9 = 90
Principles and Applications of Aircraft Mechanical Science	3	10	Merit	8	10 × 8 = 80
Principles and Applications of Aircraft Physical Science	3	10	Pass	7	10 × 7 = 70
Inspection and Repair of Airframe Components and Structures	3	10	Distinction	9	10 × 9 = 90
Mechanical Principles and Applications	3	10	Distinction	9	10 × 9 = 90
Electrical and Electronic Principles	3	10	Merit	8	10 × 8 = 80
Engineering Design	3	10	Pass	7	10 × 7 = 70
Applications of Mechanical Systems in Engineering	3	10	Merit	8	10 × 8 = 80
Further Mathematics for Engineering Technicians	3	10	Pass	7	10 × 7 = 70
Qualification grade totals		**120**	**Distinction Merit**		**970**

Example 3 - Achievement of merit merit merit qualification grade

A learner completing a 180-credit Edexcel BTEC Level 3 Extended Diploma achieves the points required to gain a merit merit merit qualification grade.

	Level	Credit	Grade	Grade points	Points per unit = credit x grade
Engineering Project	3	20	Merit	8	20 × 8 = 160
Mathematics for Engineering Technicians	3	10	Distinction	9	10 × 9 = 90
Theory of Flight	3	10	Merit	8	10 × 8 = 80
Principles and Applications of Aircraft Mechanical Science	3	10	Merit	8	10 × 8 = 80
Aircraft Workshop Principles and Practice	3	15	Pass	7	15 × 7 = 105
Aircraft Materials and Hardware	3	15	Pass	7	15 × 7 = 105
Inspection and Repair of Airframe Components and Structures	3	10	Distinction	9	10 × 9 = 90
Aircraft Electrical Machines	3	10	Pass	7	10 × 7 = 70
Aircraft Electrical Devices and Circuits	3	10	Merit	8	10 × 8 = 80
Aircraft Electronic Devices and Circuits	3	10	Merit	8	10 × 8 = 80
Aircraft Computers and Electronic Systems	3	10	Pass	7	10 × 7 = 70
Airframe Structural Concepts and Construction Methods	3	10	Pass	7	10 × 7 = 70
Aircraft Instrument and Indicating Systems	3	10	Distinction	9	10 × 9 = 90
Electrical and Electronic Principles	3	10	Merit	8	10 × 8 = 80
Mechanical Principles and Applications	3	10	Pass	7	10 × 7 = 70
Aviation Legislation	3	10	Merit	8	10 × 8 = 80
Qualification grade totals		**180**	**Merit Merit Merit**		**1400**