

Supplementary notes regarding credit and grading of the BTEC Level 3 Nationals in Mechanical 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 45-49)

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
820-879	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
1240-1299	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 Mechanical 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. All of the units within the structure of the BTEC Nationals in Mechanical Engineering are at Level 3 with the exception of two optional units - Mathematics for Engineering Technicians and Applied Electrical and Mechanical Science for Technicians - which are at Level 2. Other than these optional units, 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
Health and Safety in the Engineering Workplace	3	10	Merit	8	$10 \times 8 = 80$
Communications for Engineering Technicians	3	10	Merit	8	$10 \times 8 = 80$
Engineering Project	3	20	Pass	7	$20 \times 7 = 140$
Mathematics for Engineering Technicians	3	10	Pass	7	$10 \times 7 = 70$
Mechanical Principles and Applications	3	10	Pass	7	$10 \times 7 = 70$
Engineering Design	3	10	Pass	7	$10 \times 7 = 70$
Properties and Applications of Engineering Materials	3	10	Merit	8	$10 \times 8 = 80$
Further Mechanical Principles and Applications	3	10	Pass	7	$10 \times 7 = 70$
Applications of Mechanical Systems in Engineering	3	10	Pass	7	$10 \times 7 = 70$
Principles and Applications of Thermodynamics	3	10	Merit	8	$10 \times 8 = 80$
Mathematics for Engineering Technicians	2	5	Merit	6	$5 \times 6 = 30$
Applied Electrical and Mechanical Science for Technicians	2	5	Merit	6	$5 \times 6 = 30$
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
Health and Safety in the Engineering Workplace	3	10	Merit	8	$10 \times 8 = 80$
Communications for Engineering Technicians	3	10	Distinction	9	$10 \times 9 = 90$
Engineering Project	3	20	Distinction	9	$20 \times 9 = 180$
Mathematics for Engineering Technicians	3	10	Distinction	9	$10 \times 9 = 90$
Mechanical Principles and Applications	3	10	Merit	8	$10 \times 8 = 80$
Commercial Aspects of Engineering Organisations	3	10	Pass	7	$10 \times 7 = 70$
Applications of Mechanical Systems in Engineering	3	10	Distinction	9	$10 \times 9 = 90$
Electro, Pneumatic and Hydraulic Systems and Devices	3	10	Pass	7	$10 \times 7 = 70$
Engineering Drawing for Technicians	3	10	Merit	8	$10 \times 8 = 80$
Computer Aided Drafting in Engineering	3	10	Merit	8	$10 \times 8 = 80$
Industrial Process Measurement	3	10	Pass	7	$10 \times 7 = 70$
Qualification grade totals		120	Distinction Merit		980

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
Health and Safety in the Engineering Workplace	3	10	Merit	8	$10 \times 8 = 80$
Communications for Engineering Technicians	3	10	Distinction	9	$10 \times 9 = 90$
Engineering Project	3	20	Pass	7	$20 \times 7 = 140$
Mathematics for Engineering Technicians	3	10	Distinction	9	$10 \times 9 = 90$
Mechanical Principles and Applications	3	10	Merit	8	$10 \times 8 = 80$
Business Operations in Engineering	3	10	Pass	7	$10 \times 7 = 70$
Engineering Design	3	10	Distinction	9	$10 \times 9 = 90$
Properties and Applications of Engineering Materials	3	10	Pass	7	$10 \times 7 = 70$
Applications of Mechanical Systems in Engineering	3	10	Merit	8	$10 \times 8 = 80$
Principles and Applications of Thermodynamics	3	10	Merit	8	$10 \times 8 = 80$
Engineering Drawing for Technicians	3	10	Merit	8	$10 \times 8 = 80$
Computer Aided Drafting in Engineering	3	10	Pass	7	$10 \times 7 = 70$
Advanced Mechanical Principles and Applications	3	10	Pass	7	$10 \times 7 = 70$
Fabrication Processes and Technology	3	10	Merit	8	$10 \times 8 = 80$
Welding Technology	3	10	Pass	7	$10 \times 7 = 70$
Selecting and Using Programmable Controllers	3	10	Distinction	9	$10 \times 9 = 90$
Welding Principles	3	10	Merit	8	$10 \times 8 = 80$
Qualification grade totals		180	Merit Merit Merit		1410