

BTEC First in Engineering (Old) / BTEC First in Engineering (New) - unit mapping

The following annotation has been used throughout this mapping exercise:

LO = Learning Outcome

Elec = Electronics Programme

Mfr = Manufacturing Engineering Programme

OME = Operations and Maintenance Engineering Programme

Rationale

When developing the new units and qualifications, content from the old units was reviewed and altered to reflect more accurately the sector requirements by aligning the content closer to the National Occupational Standards (NOS).

To address the volume of content, sometimes cited as being 'over specified', the new units have been design to give more flexibility for the user, centre and learner by careful use of 'egs' within this unit content.

A quick overview is included to give the reader a summary of the relationship between the new units and those of each of the old engineering programmes:

- Electronics Programme

- Manufacturing Engineering Programme

- Operations and Maintenance Engineering Programme

This is followed by a more detailed review.

BTEC First in Manufacturing Engineering (Old) / BTEC First in Engineering (New) - unit mapping overview

Old Units \ New Units	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13
Unit 1		P											
Unit 2		P											
Unit 3	P												
Unit 4	P												
Unit 5													
Unit 6													
Unit 7										F			
Unit 8													F
Unit 9													
Unit 10							F						
Unit 11													
Unit 12													
Unit 13													
Unit 14			P										
Unit 15								F					
Unit 16					P								
Unit 17					P								

KEY

P - Partial Mapping (Some topics from the old unit appear in the new unit)

F - Full Mapping (Topics in old unit match new unit exactly or almost exactly)

BTEC First in Manufacturing Engineering (Old) / BTEC First in Engineering (New) - unit mapping overview

Old Units \ New Units	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13
Unit 18			P			P							
Unit 19												F	
Unit 20													
Unit 21													
Unit 22			P										
Unit 23													
Unit 24													
Unit 25				P									
Unit 26													
Unit 27													
Unit 28									F				
Unit 29													
Unit 30													
Unit 31													

KEY

P - Partial Mapping (Some topics from the old unit appear in the new unit)

F - Full Mapping (Topics in old unit match new unit exactly or almost exactly)

BTEC First in Operations and Maintenance Engineering (Old) / BTEC First in Engineering (New) - unit mapping overview

Old Units \ New Units	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9				
Unit 1		P											
Unit 2		P											
Unit 3	P												
Unit 4	P												
Unit 5			P										
Unit 6													
Unit 7													
Unit 8									F				
Unit 9													
Unit 10													
Unit 11				F									
Unit 12					F								
Unit 13						F							
Unit 14													
Unit 15													
Unit 16													
Unit 17													

KEY

P - Partial Mapping (Some topics from the old unit appear in the new unit)

F - Full Mapping (Topics in old unit match new unit exactly or almost exactly)

BTEC First in Operations and Maintenance Engineering (Old) / BTEC First in Engineering (New) - unit mapping overview

Old Units \ New Units	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9				
Unit 18								P					
Unit 19													
Unit 20													
Unit 21													
Unit 22													
Unit 23													
Unit 24													
Unit 25													
Unit 26							F						
Unit 27													
Unit 28													
Unit 29													
Unit 30													
Unit 31													

KEY

P - Partial Mapping (Some topics from the old unit appear in the new unit)

F - Full Mapping (Topics in old unit match new unit exactly or almost exactly)

BTEC First in Electronics (Old) / BTEC First in Engineering (New) - unit mapping overview

Old Units \ New Units	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10			
	Unit 1		P										
Unit 2		P											
Unit 3	P												
Unit 4	P												
Unit 5													
Unit 6													
Unit 7			F										
Unit 8													
Unit 9													
Unit 10													
Unit 11													
Unit 12													
Unit 13						F							
Unit 14													
Unit 15													
Unit 16													
Unit 17													

KEY

P - Partial Mapping (Some topics from the old unit appear in the new unit)

F - Full Mapping (Topics in old unit match new unit exactly or almost exactly)

BTEC First in Electronics Engineering (Old) / BTEC First in Engineering (New) - unit mapping overview

Old Units \ New Units	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10			
Unit 18													
Unit 19							F						
Unit 20				P									
Unit 21					F								
Unit 22													
Unit 23													
Unit 24								F					
Unit 25													
Unit 26													
Unit 27									F				
Unit 28													
Unit 29													
Unit 30													
Unit 31													

KEY

P - Partial Mapping (Some topics from the old unit appear in the new unit)

F - Full Mapping (Topics in old unit match new unit exactly or almost exactly)

BTEC First in Engineering (Old) / BTEC First in Engineering (New) - unit mapping in depth

New Units		Old Units		Mapping/Comments	
Number	Name	Number	Name		
Unit 1	Working Practices in Engineering	Unit 2	Working Practices	P	The new unit is 30 hours and covers LO 1.
Unit 2	Using and Interpreting Engineering Information	Unit 2	Working Practices	P	The new unit is 30 hours and covers part of LO 2.
Unit 3	Applied Electrical and Mechanical Science for Technicians	Unit 1	Applied Science and Mathematics for Technicians	P	The new unit is 30 hours and covers LO 1 and 2.
Unit 4	Mathematics for Engineering Technicians	Unit 1	Applied Science and Mathematics for Technicians	P	The new unit is 30 hours and covers LO 3 and 4.
Unit 5	Engineering Maintenance Procedures and Planning	Unit 3 OME	Operations and Maintenance Engineering	P	The new unit is 30 hours and covers LO 2.
Unit 6	Preparing and Controlling Engineering Manufacturing Operations	-	-	-	A new unit of 30 hours. This new unit does not relate to any of the units in the old specification.
Unit 7	Electronic Devices and Communication Applications	Unit 3 Elec Unit 10 Mfr	Electronic Fundamentals	F	All topics from the old unit are included in the new unit.
Unit 8	Selecting Engineering Materials	Unit 9 OME Unit 13 Mfr	Engineering Materials	F	The new unit is 30 hours and covers all topics but with less detail and depth.
Unit 9	Engineering Assembly Techniques				A new unit of 30 hours. This new unit does not relate to any of the units in the old specification.
Unit 10	Using Computer Aided Drawing Techniques in Engineering	Unit 7 Mfr	CAD Fundamentals	F	All topics from the old unit are included in the new unit.
Unit 11	Mechanical Maintenance Fundamentals	Unit 4 OME	Mechanical Maintenance Fundamentals	F	All topics from the old unit are included in the new unit. Fault finding is also covered by the new unit.

New Units		Old Units		Mapping/Comments	
Number	Name	Number	Name		
Unit 12	Electrical Maintenance Fundamentals	Unit 5 OME	Electrical Maintenance Fundamentals	F	All topics from the old unit are included in the new unit.
Unit 13	Electronic Maintenance Fundamentals	Unit 6 OME Unit 6 Elec	Electronic Maintenance Fundamentals	F	All topics from the old unit are included in the new unit. Health and safety requirements and workplace hazards are also covered by the new unit.
Unit 14	Selecting and Using Secondary Machining Techniques to Remove Material	Unit 3 Mfr	Engineering Processes and Techniques	P	The new unit covers LO 4 and many aspects of LO 1.
Unit 15	Programming CNC Machines	Unit 8 Mfr	CNC Fundamentals	F	All topics from the old unit are included in the new unit.
Unit 16	Application of Welding Processes	Unit 5 Mfr	Welding and Fabrication Principles and Technology	P	The new unit covers LO 1 and some aspects of LO 2 and 3. Selecting and obtaining information sources are also covered by the new unit.
Unit 17	Fabrication Techniques and Sheet Metal Work	Unit 5 Mfr	Welding and Fabrication Principles and Technology	P	The new unit is 30 hours and covers LO 1 and most of LO 2.
Unit 18	Engineering Marking Out	Unit 3 Mfr Unit 6 Mfr Unit 8 OME	Engineering Processes and Techniques Engineering Drawing and Marking Out	P	The new unit is 30 hours and covers some of LO 1 and many aspects of LO 4. The new unit is 30 hours and covers LO 4.
Unit 19	Electronic Circuit Construction and Testing	Unit 7 Elec Unit 12 Mfr	Electronic Circuit Construction and Testing	F	All topics from the old unit are included in the new unit.

New Units		Old Units		Mapping/Comments	
Number	Name	Number	Name		
Unit 20	Telecommunications Technology	Unit 4 Elec	Telecommunications Technology	P	The new unit covers LO 2, 3 and 4. Current developments are also covered by the new unit.
Unit 21	Application of Digital Networks	Unit 5 Elec	Introduction to Digital Networks	F	All topics from the old unit are included in the new unit.
Unit 22	Casting and Moulding Processes	Unit 3 Mfr	Engineering Processes and Techniques	P	The new unit covers some aspects of LO 1 but in a lot more detail.
Unit 23	Using Specialist Secondary Machining Techniques	-	-	-	A new unit of 30 hours. This new unit does not relate to any of the units in the old specification.
Unit 24	Personal Computer Hardware and Software Installation	Unit 8 Elec	PC Configuration Fundamentals	F	All topics from the old unit are included in the new unit.
Unit 25	Production Planning Techniques	Unit 4 Mfr	Manufacturing Technology	P	The new unit is 30 hours and covers some of LO 2 and 4.
Unit 26	Fluid Power Maintenance Fundamentals	Unit 7 OME	Fluid Power Maintenance Fundamentals	F	All topics from the old unit are included in the new unit.
Unit 27	Installing and Maintaining Home Entertainment Systems	Unit 9 Elec	Radio and Television Systems	F	All topics from the old unit are included in the new unit.
Unit 28	Application of Quality Control and Measurement in Engineering	Unit 9 Mfr	Quality Control and Measurement	F	All topics from the old unit are included in the new unit.
Unit 29	Mobile Communications Technology	-	-	-	A new unit of 30 hours. This new unit does not relate to any of the units in the old specification.
Unit 30	Applying Continuous Improvement and Problem Solving Techniques	-	-	-	A new unit of 60 hours. This new unit does not relate to any of the units in the old specification.
Unit 31	Workplace Organisation and Standard Operating Procedures	-	-	-	A new unit of 60 hours. This new unit does not relate to any of the units in the old specification.

New Units		Old Units		Mapping/Comments	
Number	Name	Number	Name		
-	-	Unit 11 Mfr	Robot Technology and Programmable Controllers	-	No new unit.
-	-	Unit 10 Elec	Domestic Electrical Appliance Principles and Technology	-	No new unit.