

Qualification mapping

**NCFE Level 1/2 Technical Award in Engineering
QN: 603/2963/4**

Mapping Document - Engineering

This document has been produced to enable Teachers and learners to map content between this qualification and a previous version of this qualification.

This document is for mapping guidance only. All mandatory content from the current specification must be delivered for completion.

New qualification:

- NCFE Level 1/2 Technical Award in Engineering (603/2963/4)

Previous versions of qualifications:

- NCFE Level 1 Certificate in Engineering (601/4592/4)
- NCFE Level 2 Certificate in Engineering (601/4532/8)

Unit 01 – Understanding the engineering world (H/616/8968)

Learning outcome	Teaching content title	Teaching content	Level 1 previous version qual. Learning outcome	Level 2 previous version qual. Learning outcome
LO1 – Understand engineering disciplines	1.1 – Engineering Discipline through Projects and Products	1.1.1 – Engineering disciplines - The learner will understand how specific engineering projects and products have shaped the modern world.	Unit 01 LO1 – The learner will know what engineering is Unit 01 LO2 – The learner will understand the engineering process	Unit 01 LO1 – The learner will know what engineering is Unit 01 LO2 – The learner will understand the advantages and disadvantages of engineering on society
	1.2 – The Health and Safety Legislation Governing Engineering	1.2.1 – Health and safety legislation - The learner will know and understand the personal safety measures for each engineering discipline.		
LO2 – Understand how science and mathematics is applied in engineering	2.1 – Application of SI Units of Measurements	2.1.1 – SI units of measurements	Unit 01 LO2 – The learner will understand the engineering process	Unit 01 LO3 – The learner will understand the use of science, technology and maths in engineering
		2.1.2 – Application of basic SI units in projects and products		
	2.2 – Equations used to Describe and Calculate Energy, Forces and Motion, Electrical, Geometry	2.2.1 – Equations for properties		
		2.2.2 – Application of equations in projects and products		

Learning outcome	Teaching content title	Teaching content	Level 1 previous version qual. Learning outcome	Level 2 previous version qual. Learning outcome
LO3 – Understand how to read engineering drawings	3.1 – Reading Engineering Drawings	3.1.1 – Drawing conventions	Unit 03 LO1 – The learner will know units of measurement, drawing equipment and scale in engineering drawing	Unit 02 LO1 – The learner will know systems of measurement, measuring devices, scale and proportion in engineering drawing
		3.1.2 – British Standards		
LO4 – Understand the properties and characteristics of engineering materials and why specific materials are selected for engineering applications	4.1 – Properties and Characteristics of Materials	4.1.1 – Properties	Unit 02 LO1 – The learner will be able to provide possible solutions to an engineering problem	N/A
		4.1.2 – Characteristics		
		4.1.3 – Materials		
LO5 - Understand engineering tools, equipment and machines	5.1 – Tools, Equipment and Machines	5.1.1 – Marking-out	Unit 04 LO1 – The learner will be able to prepare materials and tools	N/A
		5.1.2 – Modification		
		5.1.3 – Joining		
		5.1.4 – Finishing		
	5.2 – Safe and Correct Use	5.2.1 – Control measures		

Unit 02 – Skills and techniques in engineering (K/616/8969)

Learning outcome	Teaching content title	Teaching content	Level 1 previous version qual. Learning outcome	Level 2 previous version qual. Learning outcome
LO1 – Produce hand drawn engineering drawings	1.1 – Engineering Drawings	1.1.1 – A freehand sketch	Unit 03 LO1 – The learner will be able to produce a 2D engineering drawing	Unit 02 LO2 – The learner will be able to use measurement and scale to produce 2D and 3D engineering drawing
		1.1.2 – An A3 hand drafted isometric drawing sheet		
		1.1.3 – An A3 hand drafted orthographic drawing sheet		
LO2 – Produce Computer Aided Design (CAD) engineering drawings	2.1 – Engineering Drawings	2.1.1 – An A3 CAD isometric drawing sheet	N/A	
		2.1.2 – An A3 CAD orthographic drawing sheet		
LO3 – Demonstrate production planning techniques	3.1 – Production Planning	3.1.1 – Risk assessment	Unit 04 LO2 – The learner will be able to produce and review an engineering solution	Unit 03 LO4 – The learner will be able to maintain a safe working environment throughout
		3.1.2 – Production plan		
LO4 – Demonstrate processing skills and techniques applied to materials for a manufacturing task	4.1 – Skills and Techniques	4.1.1 – Prepare materials	Unit 02 LO2 – The learner will be able to produce prototypes using engineering materials	Unit 03 LO1 – The learner will be able to use common hand tools for an identified purpose
		4.1.2 – Modify shape and size of materials		
		4.1.3 – Join materials		
		4.1.4 – Finish materials		
		4.2.1 – Preparation of use		

	<p>4.2 – Safe and Correct Use of Tools, Equipment and Machines</p>	<p>4.2.2 – Control measures</p>	<p>Unit 04 LO3 – The learner will be able to maintain a safe working environment throughout</p>	<p>Unit 03 LO2 – The learner will be able to use common power/portable tools for an identified purpose</p> <p>Unit 03 LO3 – The learner will be able to use common fixed equipment for an identified purpose</p> <p>Unit 03 LO4 – The learner will be able to maintain a safe working environment throughout</p> <p>Unit 04 LO1 – The learner will be able to select a range of engineering materials for an identified purpose</p> <p>Unit 04 LO2 – The learner will be able to use a variety of processes to prepare, modify and finish engineering materials for an identified purpose</p>
--	---	--	--	--