



ETCAL Level 3 NVQ Diploma in Engineering Maintenance
600/2253/X
Structure

Qualification aim

This qualification is designed to support those learners training in Engineering Maintenance, however, it is also available for individuals who are not following an apprenticeship. It provides a structured individualised route with knowledge and skills for those who wish to achieve a qualification in Engineering Maintenance.

Qualification introduction

This qualification is made up of 4 mandatory units that will help learners to develop an understanding of the available and relevant to their capabilities and aspirations. Its mandatory units form a foundation to extend the understanding and skills in specific areas through the optional routes, in addition to these learners are required to achieve additional units selected from a suite of 11 Pathways and in accordance with the achievement definition. Learners who complete the qualification will be equipped with the knowledge and skills to underpin career development within the industry.

Assessment

The assessment criteria determine the standard required to achieve each unit and allow for a variety of assessment methods to be used as appropriate to the environment the qualification is delivered in. There is no examined assessment element in this qualification.

Achievement

Learners must achieve a minimum of 152 credits to gain the qualification. 35 credits must be achieved by completing the 4 mandatory units and the remaining credits achieved by completing the required optional units from the suite of Pathways.

Qualification Number		600/2253/X
Qualification Framework		RQF
Title		ETCAL Level 3 NVQ Diploma in Engineering Maintenance
Qualification Level		Level 3
Total Qualification Time		1520 TQT
Guided Learning Hours		324 GLH
Qualification Credit Value		152 Credits
Qualification Grading Structure		Pass / Fail

Unit Title	Mandatory/Optional	GLH	TQT	Credit Value	Grading
Mandatory Group – all four units must be completed					
Complying with Statutory Regulations and Organisational Safety Requirements	M	35		5	Pass/Fail
Using and Interpreting Engineering Data and Documentation	M	25		5	Pass/Fail
Working Efficiently and Effectively in Engineering	M	25		5	Pass/Fail
Handing Over and Confirming Completion of Maintenance Activities	M	35		20	Pass/Fail
Mechanical - Must cover the following units:					
Carrying Out Fault Diagnosis on Mechanical Equipment	O	60		50	Pass/Fail
Maintaining Mechanical Equipment	O	119		70	Pass/Fail
Plus two more units from the following:					
Restoring Mechanical Components to Usable Condition by Repair	O	91		47	Pass/Fail
Producing Replacement Components for Maintenance Activities	O	91		47	Pass/Fail
Carrying Out Preventative Planned Maintenance on Mechanical Equipment	O	74		38	Pass/Fail
Carrying Out Condition Monitoring of Plant and Equipment	O	81		39	Pass/Fail
Assisting in the Installation of Mechanical Equipment	O	161		48	Pass/Fail

Electrical - Must cover the following units:					
Carrying Out Fault Diagnosis on Electrical Equipment and Circuits	O	60		50	Pass/Fail
Maintaining Electrical Equipment	O	119		70	Pass/Fail
Modifying or Rewiring Electrical Circuits	O	63		35	Pass/Fail
Plus two more units from the following:					
Testing Electrical Equipment and Circuits	O	60		50	Pass/Fail
Carrying Out Preventative Planned Maintenance on Electrical Equipment	O	74		38	Pass/Fail
Carrying Out Condition Monitoring of Plant and Equipment	O	81		39	Pass/Fail
Assisting in the Installation of Electrical/Electronic Equipment	O	161		48	Pass/Fail
Electronic - Must cover the following units:					
Carrying Out Fault Diagnosis on Electronic Equipment and Circuits	O	60		50	Pass/Fail
Testing Electronic Equipment and Circuits	O	60		50	Pass/Fail
Repairing Electronic Equipment	O	81		62	Pass/Fail
Fluid Power - Must cover the following units:					
Carrying Out Fault Diagnosis on Fluid Power Equipment and Circuits	O	60		50	Pass/Fail
Maintaining Fluid Power Equipment	O	119		70	Pass/Fail
Plus two more units from the following:					
Carrying Out Preventative Planned Maintenance on Fluid Power Equipment	O	74		38	Pass/Fail
Carrying Out Condition Monitoring of Plant and Equipment	O	81		39	Pass/Fail
Testing Fluid Power Equipment and Systems	O	56		46	Pass/Fail
Assisting in the Installation of Fluid Power Equipment	O	161		48	Pass/Fail
Engineered Systems - Must cover the following unit:					
Carrying Out Fault Diagnosis on Engineered Systems	O	95		53	Pass/Fail
Plus two more units from the following:					
Maintaining Mechanical Equipment within an Engineered System	O	161		81	Pass/Fail
Maintaining Electrical Equipment within an Engineered System	O	161		81	Pass/Fail
Maintaining Fluid Power Equipment within an Engineered System	O	161		81	Pass/Fail
Maintaining Process Controller Equipment within an Engineered System	O	161		81	Pass/Fail
Plus one more unit from the following:					
Carrying Out Preventative Planned Maintenance on Engineered Systems	O	74		38	Pass/Fail
Carrying Out Condition Monitoring of Plant and Equipment	O	81		39	Pass/Fail
Assisting in the Installation of Equipment to Produce an Engineered System	O	161		48	Pass/Fail

Services Maintenance - Must complete the following units:					
Reading and Extracting Information from Service Drawings and Specifications	0	25		5	Pass/Fail
Carrying Out Fault Diagnosis on Services and Systems	0	60		50	Pass/Fail
Plus two more units from the following:					
Maintaining Fresh Water Distribution Systems and Equipment	0	119		70	Pass/Fail
Maintaining Waste/Foul Water Distribution Systems and Equipment	0	119		70	Pass/Fail
Maintaining Workplace Environmental Control Systems	0	119		70	Pass/Fail
Maintaining Emergency Power Generation Equipment	0	119		70	Pass/Fail
Maintaining Heating and Ventilation Systems	0	119		70	Pass/Fail
Maintaining Air Conditioning and Ventilation Systems	0	119		70	Pass/Fail
Maintaining Gas Distribution Systems and Equipment	0	119		70	Pass/Fail
Maintaining Compressed Air Systems and Equipment	0	119		70	Pass/Fail
Maintaining Process Control Systems	0	119		70	Pass/Fail
Maintaining Instrumentation and Control Systems	0	119		70	Pass/Fail
Maintaining Industrial Refrigeration Equipment	0	119		70	Pass/Fail
Maintaining Environmental Control Equipment	0	119		70	Pass/Fail
Maintaining Medical Device and Surgical Instrument Decontamination Equipment	0	119		70	Pass/Fail
Maintaining Medical Gas Pipeline Systems and Equipment	0	119		70	Pass/Fail
Plus one more unit from the following:					
Carrying Out Preventative Planned Maintenance on Services Systems and Equipment	0	74		38	Pass/Fail
Carrying Out Condition Monitoring of Plant and Equipment	0	81		39	Pass/Fail
Assisting in the Installation of Engineering Services Equipment	0	161		48	Pass/Fail
Lift Servicing - Must complete all of the following units:					
Carrying Out Fault Diagnosis on Lifts	0	60		50	Pass/Fail
Inspecting and Servicing Lift Equipment	0	74		38	Pass/Fail
Checking Lift Function	0	60		50	Pass/Fail
Rectifying Faults in Lifts	0	91		47	Pass/Fail
Lift Repair - Must complete all of the following units:					
Carrying Out Fault Diagnosis on Lifts	0	60		50	Pass/Fail
Checking Lift Function	0	60		50	Pass/Fail
Rectifying Faults in Lifts	0	91		47	Pass/Fail
Repairing/Replacing Lift Doors, Chains, Ropes and Equipment	0	91		47	Pass/Fail
Escalator Repair and Service - Must complete all of the following units:					
Carrying Out Fault Diagnosis on Escalators	0	60		50	Pass/Fail
Rectifying Faults in Escalators	0	91		47	Pass/Fail

Inspecting and Servicing Escalators	O	74		38	Pass/Fail
Testing and Reinstating Escalator Installations	O	56		46	Pass/Fail
Communications Electronics - Must cover one of the following units:					
Carrying Out Fault Diagnosis on Electronic Equipment and Circuits	O	60		50	Pass/Fail
Carrying Out Fault Diagnosis on Communication Electronic Systems	O	60		50	Pass/Fail
Plus two more units from the following:					
Testing Electronic Equipment and Circuits	O	60		50	Pass/Fail
OR (but not both)					
Testing Communication-Electronic Systems	O	60		50	Pass/Fail
Repairing Electronic Equipment	O	81		62	Pass/Fail
OR (but not both)					
Repairing Communication-Electronic Systems	O	81		62	Pass/Fail
Carrying Out Preventative Planned Maintenance on Communication-Electronic Systems	O	74		38	Pass/Fail
Modifying Communication-Electronic Systems	O	63		35	Pass/Fail
Configuring Communication-Electronic Systems	O	77		51	Pass/Fail
Installing Communication-Electronic Systems	O	81		32	Pass/Fail
Servicing Medical Equipment - Must cover all of the following units:					
Carrying Out Fault Diagnosis on Medical Equipment	O	60		50	Pass/Fail
Testing Medical Equipment	O	60		50	Pass/Fail
Carrying Out Scheduled Servicing on Medical Equipment	O	74		38	Pass/Fail
Plus three units from the following:					
Servicing Cardiovascular Equipment	O	119		70	Pass/Fail
Servicing Physiological Monitoring and Infusion Equipment	O	119		70	Pass/Fail
Servicing Anaesthetic and Ventilation Equipment	O	119		70	Pass/Fail
Servicing Operating Theatre and Surgical Equipment	O	119		70	Pass/Fail
Servicing Medical Imaging Equipment	O	119		70	Pass/Fail
Servicing Laboratory Equipment	O	119		70	Pass/Fail
Servicing Dental Equipment	O	119		70	Pass/Fail
Servicing Medical Therapeutic Equipment	O	119		70	Pass/Fail
Servicing Mechanical and Electromechanical Assistive Technology Equipment	O	119		70	Pass/Fail
Instrumentation and Control - Must cover the following units:					
Carrying Out Fault Diagnosis on Instrumentation and Control Equipment and Circuits	O	60		50	Pass/Fail
Maintaining Instrumentation and Control Equipment and Circuits	O	119		70	Pass/Fail

Plus two units from the following:					
Carrying Out Preventative Planned Maintenance on Instrumentation and Control Equipment	O	74		38	Pass/Fail
Repairing/Overhauling Instrumentation and Control Equipment	O	91		47	Pass/Fail
Testing and Calibrating Instrumentation and Control Equipment and Circuits	O	60		50	Pass/Fail
Assisting in the Installation of Instrumentation and Control Equipment	O	161		48	Pass/Fail