



ETCAL Level 3 NVQ Diploma in Engineering Technical Support
601/1821/0
Structure

Qualification aim

This qualification is designed to support those learners training in Engineering Technical Support, 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 Technical Support.

Qualification introduction

This qualification is made up of 3 mandatory units that will help learners to develop an understanding of the knowledge and skills required as 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 6 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

In order to achieve this qualification a learner must complete all units as mandatory. 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 123 credits to gain the qualification. 15 credits must be achieved by completing the 3 mandatory units and the remaining credits achieved by completing the required optional units from the suite of Pathways.

Qualification Number		601/1821/0
Qualification Framework		RQF
Title		ETCAL Level 3 NVQ Diploma in Engineering Technical Support
Qualification Level		Level 3
Total Qualification Time		1230 TQT
Guided Learning Hours		470 GLH
Qualification Credit Value		123 Credits
Qualification Grading Structure		Pass / Fail

Unit Title	Mandatory/Optional	GLH	TQT	Credit Value	Grading
Mandatory Group – all units must be completed					
Complying with Statutory Regulations and Organisational Safety Requirements	M	35		5	Pass/Fail
Using and Interpreting Engineering Drawings and Documents	M	25		5	Pass/Fail
Working Efficiently and Effectively in Engineering	M	25		5	Pass/Fail
Engineering Drawing - Must complete one of the following units:					
Producing Mechanical Engineering Drawings using Computer Aided Techniques	O	294		150	Pass/Fail
Producing Engineering Drawings/Models using 3D Computer Aided Techniques	O	294		150	Pass/Fail
Producing Electrical Engineering Drawings using Computer Aided Techniques	O	294		150	Pass/Fail
Producing Electronic Engineering Drawings using Computer Aided Techniques	O	294		150	Pass/Fail
Producing Fabrication/Structural Engineering Drawings using Computer Aided Techniques	O	294		150	Pass/Fail

Producing Fluid Power Engineering Drawings using Computer Aided Techniques	O	294		150	Pass/Fail
Producing Engineering Systems/Services Drawings using Computer Aided Techniques	O	294		150	Pass/Fail
Quality Control - Must complete one of the following units:					
Inspecting Mechanical Products	O	287		142	Pass/Fail
Inspecting Components using Co-Ordinate Measuring Machines (CMM)	O	287		140	Pass/Fail
Inspecting Fabricated Components and Structures	O	287		142	Pass/Fail
Carrying Out Visual Inspection of Welded Fabrications	O	287		142	Pass/Fail
Inspecting and Testing Electrical Products	O	287		142	Pass/Fail
Inspecting and Testing Electronic Products	O	287		142	Pass/Fail
Checking and Calibrating Mechanical Inspection Equipment	O	287		139	Pass/Fail
Checking and Calibrating Electrical and Electronic Test Equipment	O	287		139	Pass/Fail
Checking and Calibrating Process Control Instrumentation	O	287		139	Pass/Fail
Non-Destructive Testing - Must complete EITHER - One of the following pairs of units:					
Preparing Ultrasonic Flaw Detection Equipment for Testing Activities	O	91		36	Pass/Fail
Inspecting Engineering Products using Ultrasonic Testing Techniques	O	189		82	Pass/Fail
Preparing Work Areas for Radiographic Testing Activities	O	91		36	Pass/Fail
Carrying Out Radiographic Testing Activities	O	189		82	Pass/Fail
OR two units from the following:					
Determining Technical Requirement for Non-Destructive Testing	O	168		65	Pass/Fail
Specifying Non-Destructive Testing Instructions for Inspection Activities	O	168		70	Pass/Fail
Inspecting Engineering Products by Penetrant Flaw Detection Techniques	O	119		52	Pass/Fail
Inspecting Engineering Products by Magnetic Particle Testing	O	189		82	Pass/Fail
Analysing and Interpreting the Results of Radiographic Tests	O	168		70	Pass/Fail
Computer Control Programming - Must complete one of the following units:					
Providing Operational Support for Computer Control Programs	O	106		54	Pass/Fail
Loading and Proving Computer Control Programs	O	91		24	Pass/Fail
Plus one more from the following:					
Producing Operating Programs for Co-ordinate Measuring Machines (CMM)	O	231		84	Pass/Fail
Producing Off-line Programs for Programmable Logic Controller Equipment	O	231		84	Pass/Fail
Producing Operating Programs for Industrial Robots	O	231		84	Pass/Fail
Producing Off-line Programs for NC/CNC Laser Profiling Machines	O	231		84	Pass/Fail
Producing Off-line Programs for NC/CNC Fabrication Machines	O	231		84	Pass/Fail

Producing Off-line Programs for NC/CNC Turning Machines	O	231		84	Pass/Fail
Producing Off-line Programs for NC/CNC Milling Machines	O	231		84	Pass/Fail
Producing Off-line Programs for NC/CNC Grinding Machines	O	231		84	Pass/Fail
Producing Off-line Programs for NC/CNC Gear Cutting Machines	O	231		84	Pass/Fail
Producing Off-line Programs for NC/CNC Electro-Discharge Machining	O	231		84	Pass/Fail
Producing Off-line Programs for NC/CNC Boring Machines	O	231		84	Pass/Fail
Producing Off-line Programs for NC/CNC Machining Centres	O	231		84	Pass/Fail
Integrated Business Operational Support - Must complete the following unit:					
Resolving Engineering Problems	O	96		40	Pass/Fail
Plus three more units one of which must be from Group A - Group A Units:					
Planning Engineering Activities	O	106		40	Pass/Fail
Implementing Engineering Activities	O	106		40	Pass/Fail
Monitoring Engineering Activities	O	106		40	Pass/Fail
Producing Technical Information for Engineering Activities	O	106		40	Pass/Fail
Obtaining Resources for Engineering Activities	O	106		40	Pass/Fail
Obtaining and Controlling Materials for Engineering Activities	O	106		40	Pass/Fail
Providing Technical Sales and Marketing Support for Engineering Activities	O	106		40	Pass/Fail
Implementing Quality Control Systems and Procedures in an Engineering Environment	O	106		40	Pass/Fail
Scheduling Engineering Activities	O	106		40	Pass/Fail
Determining Engineering Requirements for the Supply of Products or Services	O	106		40	Pass/Fail
Carrying out Condition Monitoring of Engineering Plant and Equipment	O	81		39	Pass/Fail
Carrying out Fault Diagnosis on Engineering Plant and Equipment	O	60		50	Pass/Fail
Supporting Logistics Operations in an Engineering Manufacturing Environment	O	106		40	Pass/Fail
Group B Units:					
Providing Technical Advice and Guidance on Engineering Activities	O	106		40	Pass/Fail
Carrying out Project Management of Engineering Activities	O	106		40	Pass/Fail
Developing and Maintaining Effective Customer Relationships	O	35		20	Pass/Fail
Handing Over and Exchanging Responsibility for Control of Engineering Activities	O	35		20	Pass/Fail
Carrying out Health and Safety Risk Assessments on Engineering Activities	O	106		40	Pass/Fail
Producing Contractual Arrangements to Supply or Procure Goods or Services for Engineering Activities	O	106		40	Pass/Fail

Using and maintaining Business Procedures and Protocols in an Engineering Environment	O	106		40	Pass/Fail
Engineering Software Development - Must complete all of the following units:					
Determining Engineering Software Requirements	O	71		40	Pass/Fail
Producing Engineering Software Design	O	99		50	Pass/Fail
Producing Engineering Software Implementation	O	71		40	Pass/Fail
Testing Engineering Software	O	99		50	Pass/Fail
Plus one more from the following:					
Performing Engineering Software Analysis Techniques	O	99		50	Pass/Fail
Measuring Engineering Software Quality	O	71		40	Pass/Fail
Performing Engineering Software Configuration Management	O	99		50	Pass/Fail
Performing Engineering Software Acquisition	O	71		40	Pass/Fail
Performing Engineering Software Safety Assessments	O	71		40	Pass/Fail
Performing Low Level Programming for Engineering Software	O	99		50	Pass/Fail
Performing Computer System Security Assessments for Engineering Software	O	71		40	Pass/Fail