

Qualification Manual



EAL Level 3 NVQ Diploma in Engineering Leadership

Qualification Code: 600/1030/7

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1.0 About EAL

Since 1964, EAL (**Excellence, Achievement and Learning**) has been awarding superior vocational qualifications and apprenticeship components for engineering, building services and related sectors.

Developed to the highest technical standard, our qualifications are regularly updated to reflect regulatory and technical changes. We support the providers of our qualifications with an unparalleled level of service to ensure that learners are well prepared for the roles they plan to take on.

EAL recognise the value of skills in the work environment as one of the five key drivers of productivity; essential for economic growth and bringing a number of wider social benefits. Through its programme of continuous improvement EAL strives to meet the demand from employers for high performing, high quality products.

In 2012, EAL changed its name from EMTA Awards Limited to **Excellence, Achievement and Learning**, to better reflect its wide reaching position across industry – providing qualifications, not only in Engineering and Manufacturing, but also specialising in Building Services Engineering, Gas Utilisation, Environmental Technologies, Business Services and closely related sectors

1.1 Equal opportunities and diversity

EAL expects its centres to enable Learner's to have equal access to training and assessment for qualifications in line with the Equality Act 2010 and protected characteristics. Further details can be located in the EAL Equal Opportunities and Diversity Policy:

<http://www.eal.org.uk/centre-support/centre-support/policies-and-important-documents>

1.2 Customer Service and Feedback

Customer service is a fundamental part of EAL's commitment to industry. Our long-term partnership with industry and recognised Centres – which is underpinned by our unique external quality assurance service and world class and means our support is based on unrivalled understanding of our customers' needs.

EAL aims to ensure that all customers receive a high quality and efficient service and we continually monitor the levels of service provided. There may be times, however, when you may feel that we have not provided an adequate service.

In these situations, please contact our customer services team:

EAL Customer Services:
Tel: +44 (0)1923 652 400
<mailto:customercare@eal.org>

2.0 Introduction to the Qualification

What is this qualification?

This qualification is a National Vocational Qualification (NVQ). It involves the skills and knowledge needed for occupations in Engineering Leadership including the, ability to organise work and identify and prevent problems. NVQs are based on national occupational standards, which the learner must meet to be competent in a particular task. The achievement of NVQs will encourage an employee to value their contribution to the workplace, and it will develop their skills and potential within the Engineering Leadership field.

Who is this qualification for?

- Individuals who need recognition of their competence in one or more of a wide variety of Engineering Leadership activities and also need a nationally recognised qualification at level three
- Those who are working in a Engineering Leadership environment and would like to work towards a relevant level three qualification,
- Those who are new to Engineering Leadership but are looking for a career change and wish to develop new skills within the industry..

What does this qualification cover?

The skills and knowledge in one or more of a wide variety of Engineering Leadership activities including:

- Create Engineering Drawings using Computer-Aided Techniques,
- Controlling the scheduling of resources for engineering activities,
- Implementing Engineering Activities,
- Resolving Engineering Problems,
- Monitoring Engineering Activities,
- Analysing the risks arising from engineering activities,
- Implementing Quality Control Systems and Procedures in an Engineering Environment.

2.1 Status and Support

This qualification is:

- Regulated at level 3,
- Supported by SEMTA,
- Developed with industry support.

2.2 Achievement of the Qualification and ‘Stand Alone Units’

This qualification is gained when all the necessary units have been achieved. The centre will then be able to apply for the learner’s Certificate. The learner will also receive a Certificate of Unit Credit, listing all the units they have achieved which means they will still have proof of their ability, and could complete the qualification at a later date.

Units can also be taken individually (stand alone). The qualification manual must be used in conjunction with the delivery and assessment of any individual units to ensure that assessment requirements and methodologies are consistently applied.

2.3 Relation to Other Qualifications

This qualification relates to:

- EAL Level 3 NVQ Diploma in Marine Engineering
- EAL Level 3 NVQ Diploma in Engineering Maintenance,
- EAL Level 3 NVQ Diploma in Engineering Installation and Commissioning
- EAL Level 3 NVQ Diploma in Mechanical Manufacturing Engineering
- EAL Level 4 NVQ Diploma in Engineering Leadership
- EAL level 4 NVQ Diploma in Management
- EAL's suite of Certificates and Diplomas in Engineering and Technology Subjects

Further details on these can be obtained from the EAL Website or alternatively contact:

- EAL Customer Services
- Tel: +44 (0)1923 652400
- Email: customercare@eal.org.uk

2.4 Qualification Support Materials

The following materials are available for this qualification:

- **Qualification Units:**
These contain the details of the nationally recognised units. These documents allow both the learner and the assessor to record the progress through the qualification. The units contain the performance to be assessed, the knowledge to be assessed and the evidence required from the learner to demonstrate their competence; units also contain
 - Level & Credit value
 - Guided learning hours (GLH)
 - Title, Unit purpose/aims

3.0 Rules of Combination (Qualification Structure)

3.1 EAL Level 3 NVQ Diploma in Engineering Leadership

This qualification has 307 guided learning hours (GLH) and 101 credits. It has a total qualification time of 1010 hours which is the notional time required by the learner to complete the qualification. The learner must complete the mandatory units plus six optional units which must include a minimum of two from Group A and one from Group B.

Mandatory units: Both units must be completed:

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QENL3/001	Complying with statutory regulations and organisational safety requirements	2	5	35	A/601/5013
QENL3/002	Plan, allocate and monitor work of a team	3	5	25	Y/600/9669

Group A: Optional units: Select at least TWO of the following units:

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QENL3/003	Create engineering drawings using computer-aided techniques	3	40	98	M/502/8136
QENL3/004	Controlling the scheduling of resources for engineering activities	3	40	106	T/502/8137
QENL3/005	Obtaining resources for engineering activities	3	40	106	A/600/5775
QENL3/006	Implementing engineering activities	3	40	106	J/600/5763
QENL3/007	Resolving engineering problems	3	40	96	K/600/5755
QENL3/008	Monitoring engineering activities	3	40	106	D/600/5767
QENL3/009	Analysing the risks arising from engineering activities	3	40	91	A/502/8138
QENL3/010	Implementing quality control systems and procedures in an engineering environmen	3	40	106	H/600/5785

Group B: Optional units: Select at least ONE of the following units:

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QENL3/011	Manage personal development	3	4	20	F/600/9469
QENL3/012	Develop working relationships with colleagues	3	3	15	H/600/9660
QENL3/013	Lead and manage meetings	3	4	20	Y/600/9686
QENL3/014	Make effective decisions	3	3	10	F/600/9715
QENL3/015	Manage conflict in a team	3	3	20	R/600/9685
QENL3/016	Manage customer service in own area of responsibility	3	4	25	D/600/9804
QENL3/017	Manage knowledge in own area of responsibility	3	4	15	T/600/9730
QENL3/018	Manage and support equality of opportunity, diversity and inclusion in own area of responsibility	3	4	20	M/600/9628
QENL3/019	Manage own professional development within an organisation	3	4	20	L/600/9586
QENL3/020	Procure supplies	3	2	20	L/600/9734
QENL3/021	Set objectives and provide support for team members	3	5	35	M/600/9600
QENL3/022	Support team members in identifying, developing and implementing new ideas	3	4	20	L/600/9636

4.0 Centre & Qualifications Approval

Centres wishing to run this qualification will need to comply with this Qualification Manual and EAL's centre approval criteria. Centres must also put in place the appropriate physical and human resources and administration systems to effectively run the qualification.

For *existing* EAL Centres to put the qualification on your centre remit:

The approval form can be downloaded from the centre area of the EAL Website or alternatively obtained from the EAL Centre Operations Manual. Please contact your EV, or EAL Customer Services (see below) if you need any assistance.

For *non* EAL Centres to gain centre approval to run the qualification:

Please contact the EAL Customer Services Department who will be delighted to hear from you: Tel: 01923 652400 or Email: customercare@eal.org.uk

5.0 Profiles and Requirements

The centre personnel involved in this qualification must meet the requirements in this section.

5.1 Learners

There are no entry qualifications or age limits required by learners to undertake the NVQ assessment routes unless this is a legal requirement of the process or the environment. Assessment is open to any learner who has the potential to achieve the assessment criteria set out in the assessment routes.

Aids or appliances, which are designed to alleviate disability, may be used during assessment, providing they do not compromise the standard required

5.2 Assessors

Assessors must demonstrate that they:

- Have credible expertise in management and leadership relevant to the level(s)/units they are assessing or verifying.
- Keep themselves up-to-date with developments in management and leadership practice;
- Have a thorough understanding of the NOS for management and leadership at the unit(s)/level(s) they are assessing or quality assuring.
- Have up-to-date working knowledge and experience of best practice in assessing,
 - Hold a recognised qualification in Assessing Competence in the Work Environment, Assessing Vocational Achievement, Assessing Learner Performance Using a Range of Methods, or an equivalent
- Show current evidence of continuing professional development in assessment and quality assurance.

Assessors must also be:

Fully conversant with EAL's assessment recording documentation used for the NVQ assessment routes against which the assessments and verification are to be carried out and other relevant documentation and systems and procedures to support the QA process.

5.3 Internal Quality Assurers

All those who quality assure this qualification internally must:

- Have up-to-date working knowledge and experience of best practice in assessment and quality assurance.
- Hold one of the following internal quality assurance qualifications or their recognised equivalent:
 - the Level 4 Award in the Internal Quality Assurance of Assessment Processes and Practice, or
 - the Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Processes and Practice, or
 - V1 Conduct internal quality assurance of the assessment process, or
 - D34 Internally verify the assessment process.
- Show current evidence of continuing professional development in assessment and quality assurance.

6.0 Assessment

For general guidance on Assessment and Internal Quality Assurance please refer to the EAL guide on Smarter Touch. This can be found under the documents tab and is entitled “Centre Guidance” – Operations at the Centre.

6.1 Assessment Environment

The evidence put forward for the assessment route can only be regarded as valid, reliable, sufficient and authentic if achieved and obtained in the working environment and be clearly attributable to the learner. However, in certain circumstances, simulation/replication of work activities may be acceptable.

The use of high quality, realistic simulations/replication, which imposes pressures which are consistent with workplace expectations, should only be used in relation to the assessment of the following:

- rare or dangerous occurrences, such as those associated with health, safety and the environment issues, emergency scenarios and rare operations at work;
- the response to faults and problems for which no opportunity has presented for the use of naturally occurring workplace evidence of learners competence;
- aspects of working relationships and communications for which no opportunity has occurred presented for the use of naturally occurring workplace evidence of learners competence.

Simulations/replications will require prior approval from EAL and should be designed in relation to the following parameters:

- the environment in which simulations take place must be designed to match the characteristics of the working environment;
- competencies achieved via simulation/replication must be transferable to the working environment;
- simulations which are designed to assess competence in dealing with emergencies, accidents and incidents must be verified as complying with relevant health, safety and environmental legislation by a competent health and safety/environmental control officer before being used;
- simulated activities should place learners under the same pressures of time, access to resources and access to information as would be expected if the activity was real;
- simulated activities should require learners to demonstrate their competence using plant and/or equipment used in the working environment;
- simulated activities which require interaction with colleagues and contacts should require the learner to use the communication media that would be expected at the workplace;
- for health and safety reason simulations need not involve the use of genuine substances/materials. Any simulations which require the learner to handle or otherwise deal with materials substances/should ensure that the substitute takes the same form as in the workplace.

6.2 Carrying Out Assessment

EAL strongly recommends that the majority of assessment evidence for the mandatory assessment routes is gathered during the performance of the optional assessment routes. Evidence should be obtained as a whole, where practically possible, since competent performance in the optional assessment routes is often dependent on competence in the mandatory assessment routes. Although it is possible to achieve this qualification with the minimum number of optional assessment routes, organisations may wish their learners to be assessed for more than this. Mandatory assessment routes should be assessed in the context of all optional assessment routes chosen.

The NVQ Assessment Routes were developed to cover a wide range of activities. The evidence produced for this qualification will, therefore, depend on the learner's choice of 'scope items' listed in the assessment criteria.

Where the assessment criteria gives a choice of bulleted items (for example 'any three from five'), assessors should note that learners do not need to provide evidence of the other items to complete the assessment route (in this example, two) items, particularly where these additional items may relate to other activities or methods that are not part of the learners normal workplace activity or area of expertise.

6.3 Minimum Performance Evidence Requirements

Performance evidence must be the main form of evidence gathered. In order to demonstrate consistent, competent performance for an assessment route, a minimum of 3 different examples of performance must be provided, and must be sufficient to show that the assessment criteria have been achieved to the prescribed standards. **Important note: each example of performance must cover all the numbered Performance Statements – they cannot be atomised.**

It is possible that some of the alphabetical scope items in the assessment criteria may be covered more than once. The assessor and learner need to devise an assessment plan to ensure that performance evidence is sufficient to cover all the specified assessment criteria and which maximises the opportunities to gather evidence. Where applicable, performance evidence maybe used for more than one assessment route.

The most effective way of assessing competence, is through direct observation of the learner. Assessors must make sure that the evidence provided reflects the learner's competence and not just the achievement of a training programme.

Evidence that has been produced from team activities, for example, maintenance or installation activities is only valid when it clearly relates to the learners specific and individual contribution to the activity, and not to the general outcome(s).

Each example of performance evidence will often contain features that apply to more than one assessment route, and can be used as evidence in any assessment route where appropriate.

Performance evidence must be a combination of:

- outputs of the learner's work, such as items that have been manufactured, installed, maintained, designed, planned or quality assured, and documents produced as part of a work activity

Supplemented as appropriate by:

- evidence of the way the learner carried out the activities such as witness testimonies, assessor observations or authenticated learner reports, records or photographs of the work/activity carried out, etc

Competent performance is more than just carrying out a series of individual set tasks. Many of the assessment routes contain statements that require the learner to provide evidence that proves they are capable of combining the various features and techniques. Where this is the case, separate fragments of evidence would not provide this combination of features and techniques and will not, therefore, be acceptable as demonstrating competent performance.

If there is any doubt as to what constitutes valid, authentic and reliable evidence, the internal and/or external verifier should be consulted.

6.4 Assessing Knowledge & Understanding

Knowledge and understanding are key components of competent performance. In many instances, knowledge and understanding can be inferred by competent performance but where this is not apparent, it must be assessed by other means and supported by suitable evidence.

Knowledge and understanding can be demonstrated in a number of different ways. EAL expects oral questioning and practical demonstrations to be used, as these are considered the most appropriate for these assessment routes. Assessors should ask enough questions to make sure that the learner has an appropriate level of knowledge and understanding, as required by the assessment route. Evidence of knowledge and understanding will not be required for those bulleted items in the assessment criteria that have not been selected by the learner.

The achievement of the specific knowledge and understanding requirements of the assessment routes cannot simply be inferred by the results of tests or assignments from other assessment routes, qualifications or training programmes. Where evidence is submitted from these sources, the assessor must, as with any assessment, make sure the evidence is valid, reliable, authentic, directly attributable to the learner, and meets the full knowledge and understanding requirements of the assessment route.

Where oral questioning is used the assessor must retain a record of the questions asked, together with the learner's answers.

6.5 Witness Testimony

Where observation is needed to obtain performance evidence, this must be carried out against the assessment route assessment criteria. Best practice would require that such observation is carried out by a qualified Assessor. If this is not practicable, then alternative sources of evidence may be used.

For example, the observation may be carried out against the assessment criteria by someone else that is in close contact with the learner. This could be a team leader, supervisor, mentor or line manager who may be regarded as a suitable witness to the learner's competency. However, the witness must be technically competent in the process or skills that they are providing testimony for, to at least the same level of expertise as that required of the learner. It will be the responsibility of the assessor to make sure that any witness testimonies accepted as evidence of the learner's competency are reliable, auditable and technically valid.

6.6 Quality Control of Assessment

General

There are two major points where EAL interacts with the Centre in relation to the External Quality Control of Assessment for a qualification and these are:

- Approval: When a Centre take on new qualifications, the EAL External Quality Assurer (EQA) ensures that the Centre is suitably equipped and prepared to deliver the new qualification.
- Monitoring: Throughout the ongoing delivery of the qualification EAL, through EQA monitoring and other mechanisms will maintain the quality and consistency of the assessment of the qualification.

Approval

In granting approval, EAL, normally through its EQA's will ensure that the prospective Centre:

- meets any procedural requirements specified by the Awarding Organisation,
- has sufficient and appropriate physical and staff resources,
- meets relevant health and safety and/or equality and access requirements
- has a robust plan for the delivery, assessment and QA for the qualifications.

Monitoring

EAL, through EQA monitoring and other mechanisms will ensure:

- that a strategy is developed and deployed for the ongoing monitoring of the Centre. This strategy is based on an on going risk assessment of the Centre. In particular the strategy will identify the learner, assessor and IV sampling strategy to be deployed and the rationale behind this,
- that the Centre's internal quality assurance processes are effective in assuring the quality of learner assessment,
- actions for improvement , restrictions and sanctions are applied to a Centre where necessary and that corrective actions are taken by the Centre and monitored by the EQA
- that reviews of EAL's external auditing arrangements are undertaken.

7.0 About the Qualification Units

Each of this qualification is made up of a number of nationally recognised units which EAL term 'assessment routes'. These documents allow both the learner and the assessor to record the progress through the chosen qualification. The assessment routes contain the performance to be assessed, the knowledge to be assessed and the evidence required from the learner to demonstrate their competence.

All assessment routes in this qualification contain the following information:

- Qualification & assessment route title
- Assessment route level
- Credit value
- Guided learning hours (GLH)
- Assessment route summary
- Performance to be assessed and evidenced (assessment criteria)
- Knowledge to be assessed and evidenced (knowledge requirements).

Appendix 1: Learner Registration and Certification

Learners must be registered with EAL on a code which relates to the qualification -this **must be** completed prior to assessment. Both learner registration and certification can be completed on line in the “online services” section of the EAL Website www.eal.org.uk. This site contains information and guidance for both electronic and paper based registration and certification.

To Register the Learner on the Chosen Qualification/Pathway Code:

Qualification Title	Code
EAL Level 3 NVQ Diploma in Engineering Leadership	600/1030/7ENA

For further information please contact EAL Customer Services +44 (0)1923 652 400.

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EAL is the only awarding organisation to invest in the industries it serves and the careers of those who work within them.