

Qualification Manual

Level 2 Certificate and Diploma in:

Engineering Operations (Knowledge)

Qualification Codes: 603/3194/X (Certificate)
603/3195/1 (Diploma)

Contents

Contents	1
1.0 About EAL	2
2.0 Achievement of the qualification	3
3.0 Centre and qualification approval	5
4.0 Qualification specific information	6
5.0 Profiles and requirements	9
6.0 Assessment	12
7.0 External quality control of assessment	16
Appendix 1: Examination specification	17
Appendix 2: Learner registration and certification	18

1.0 About EAL

Since 1964 EAL (Excellence Achievement and Learning) has been the specialist awarding organisation for the industry and related sectors. Our commitment to partnering industry together with the focus on our core sectors gives us an unrivalled understanding of the skills employers need. This results in qualifications that carry weight and respect with employers which deliver real career benefits for learners.

EAL support the delivery network with an unparalleled level of service to ensure that learners are well prepared for the roles they plan to take on. Through its programme of continuous improvement, EAL strives to meet the demand from employers for high performing, high quality products.

1.1 Equal opportunities and diversity

EAL expects its Centres to enable learners to have equal access to training and assessment for qualifications in line with the Equality Act 2010 and protected characteristics. Further details can be found 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 you. EAL aims to ensure that all customers receive a high quality efficient service. We are always interested in feedback and if you have any comments or feedback on our qualifications, products or services, please contact the Customer Services Team:

EAL Customer Services

Tel: +44 (0)1923 652 400

Email: customercare@eal.org.uk

2.0 Achievement of these qualifications

These qualifications are achieved when all the necessary units have been completed. The Centre will then be able to apply for the learner's certificate of achievement. Learners will also receive a certificate of unit credit, listing all the units they have achieved.

This 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.

In order to articulate the specific level of skills, knowledge and behaviours required to be achieved and assessed, the employers in the Trailblazer Group have developed a more detailed Employer Occupational Brief (EOB).

The overarching EOB informs awarding organisations of the required elements of both knowledge and vocational skills within the apprenticeship Standard. It also provides a clear basis for the development of the assessment of the apprenticeship and enables the sector to maintain world class levels of quality to ensure that the credibility and consistency of the apprenticeship outcome is maintained.

The EOB comprises of a number of documents including the rules of combination and the qualification assessment strategy requirements both of which are included in this manual. The EOB also contains the units of competence that make up the qualification.

Also contained within the EOB are the apprenticeship Standard and the accompanying Assessment Plan. Both these documents should be read in conjunction with this manual.

The apprenticeship covered by this qualification manual are: Level 2 Engineering Operative Standard. Please refer to individual Standards and Assessment Plans for guidance on mandatory qualification requirements.

The apprenticeship Standard/s and the Assessment Plan/s for this apprenticeship can be found here:

<https://www.instituteforapprenticeships.org/apprenticeship-standards/engineering-operative/>

There are various other qualifications which this qualification could relate to. Details on these can be obtained from the [EAL website](#) or alternatively contact:

EAL Customer Services

Tel: +44 (0)1923 652 400

Email: customercare@eal.org.uk

2.1 Qualification support materials

The following materials are available for these qualifications:

- **Delivery packs:** which contain the qualification units, all relevant tutor guidance relating to the delivery and assessment and marking schemes for internally assessed practical and theory assessments
- **Learner assessment packs:** which contain the qualification units, the internally assessed practical and theory assessments, assessment checklists and all associated guidance for learners
- **Controlled knowledge assessments:** which contain knowledge assessments that must be completed by the learner under appropriately controlled conditions
- ***Practice question paper/s:** for the externally set and marked on-screen test, with feedback to learners on their performance.

*The practice papers are available to schedule online as per externally set and marked examinations.

All other materials can be accessed by EAL registered Centres from the EAL Website: <http://eal.org.uk/>

2.2 What are these qualifications?

These qualifications provide learners with the core knowledge, understanding and behaviours required for a range of Manufacturing and Engineering occupational roles. It takes a hands-on approach to training by providing the learner with:

- Core knowledge and understanding of a range of occupational roles from across the engineering and manufacturing sector.
- Core behaviours that will ensure success in their role and help them to achieve their potential.
- A wide range of core knowledge and behaviours that can be transferred across the manufacturing engineering industry sectors.

2.3 Achievement of these qualifications

The **EAL Level 2 Certificate in Engineering Operations (Knowledge)** will be awarded when the learner has successfully completed:

- One mandatory unit.
- Three optional units.

This qualification has a minimum 210 GL(H) and 220 Total Qualification Time.

The **EAL Level 2 Diploma in Engineering Operations (Knowledge)** will be awarded when the learner has successfully completed:

- One mandatory unit.
- Six optional units.

This qualification has a minimum 370 GL(H) and 420 Total Qualification Time.

2.4 Funding for these qualifications

EAL accredits qualifications via regulatory bodies. The regulatory bodies then pass the information to the relevant funding agencies. Once funding is available, centres will be able to check and register against the learning aim to ensure funding is drawn down. If you are unsure whether funding is available, the first point of contact should be via your internal funding system, or alternatively contact EAL for information.

3.0 Centre and qualification approval

Centres wishing to run the qualifications will need to comply with the Qualification Manual and EAL's centre recognition criteria for these qualifications upon accreditation and launch. Centres must also put in place the appropriate physical and human resources and administration systems to effectively run the qualifications. Please refer to Section 5 for the requirements of centre staff involved in the delivery of the qualifications.

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

- To add these qualifications to your centre qualification remit, create and complete a qualification approval application form in Smarter Touch and submit to EAL.

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: +44 (0)1923 652400
Email: customercare@eal.org.uk

4.0 Qualification specific information

The **EAL Level 2 Certificate in Engineering Operations (Knowledge)** will be awarded when the learner has successfully completed:

- One mandatory unit.
- Three optional units.

This qualification has a minimum 210 GL(H) and 220 Total Qualification Time.

The **EAL Level 2 Diploma in Engineering Operations (Knowledge)** will be awarded when the learner has successfully completed:

- One mandatory unit.
- Six optional units.

This qualification has a minimum 370 GL(H) and 420 Total Qualification Time.

Mandatory unit: Certificate and Diploma: This unit **must** be completed:

EAL Code	Unit Title	GL(Hrs)	Ofqual Code
EOK2/001	Engineering environment awareness	60	R/617/0084

Optional Units: Certificate: Three units must be completed;

Diploma: Six units must be completed:

EAL Code	Unit Title	GL(Hrs)	Ofqual Code
EOK2/002	Engineering techniques	60	Y/617/0085
EOK2/003	Engineering mathematics and science principles	60	H/617/0087
EOK2/004	Electrical and electronic principles	50	K/617/0091
EOK2/005	Electrical and electronic testing methods	50	M/617/0092
EOK2/006	Electrical and electronic systems and devices	50	A/617/0094
EOK2/007	Fabrication and welding principles	50	L/617/0097
EOK2/008	Manual welding techniques	50	Y/617/0099
EOK2/009	Producing components from metal plate	50	R/617/0103
EOK2/010	Producing components from sheet metal	50	D/617/0105
EOK2/011	Sheet metalwork technology	50	K/617/0110
EOK2/012	Non-fusion thermal joining methods	50	T/617/0112
EOK2/013	Thermal cutting techniques	50	A/617/0113
EOK2/014	Engineering maintenance safety practices	50	L/617/0116
EOK2/015	Engineering maintenance techniques	50	R/617/0120
EOK2/016	Engineering maintenance planning	50	Y/617/0121
EOK2/017	Engineering materials processes	50	M/617/0125
EOK2/018	Fitting and assembly techniques	50	A/617/0127
EOK2/019	Manual turning techniques	50	F/617/0128
EOK2/020	Manual milling techniques	50	J/617/0129
EOK2/021	Principles of turning & milling	80	A/617/0130
EOK2/022	Computer numerical control turning techniques	50	F/617/0131
EOK2/023	Computer numerical control milling techniques	50	T/617/0126
EOK2/024	Principles of Computer Numerical Control (CNC) machining / fabrication	80	K/617/0124

Optional units - Continued

EAL Code	Unit Title	GL(Hrs)	Ofqual Code
EOK2/025	Grinding techniques	50	H/617/0123
EOK2/026	Electrical installation methods, wiring and circuit protection	50	D/617/0122
EOK2/027	Basic electrical circuit inspection, testing and fault diagnosis	50	D/617/0119
EOK2/028	Building services pipework fixing, bending and jointing methods	50	Y/617/0118
EOK2/029	Building services engineering pipework fabrication processes and techniques	50	R/617/0117
EOK2/030	Building services pipework systems	50	F/617/0114
EOK2/031	Building services engineering systems and their layout requirements	50	M/617/0111
EOK2/032	Installation and servicing of refrigeration equipment	50	T/617/0109
EOK2/033	Installation and servicing of air-conditioning equipment	50	M/617/0108
EOK2/034	Installation of security systems	50	K/617/0107
EOK2/035	Security installation design	50	H/617/0106
EOK2/036	Understanding Computer Aided Drawing (CAD)	50	Y/617/0104
EOK2/037	Applied mathematics in engineering	50	L/617/0102
EOK2/038	Business improvement techniques	50	J/617/0101
EOK2/039	Leading a team in engineering	50	F/617/0100
EOK2/040	Plan and carry out a project in engineering	50	R/617/0098
EOK2/041	Engineering manufacturing techniques	50	J/617/0096
EOK2/042	Engineering design techniques	50	F/617/0095
EOK2/043	Marketing an engineering product	50	T/617/0093
EOK2/044	Additive manufacturing (3D printing)	50	H/617/0090
EOK2/045	Understand effective working practices in an engineering environment when working on military vehicles and equipment	30	M/617/0089
EOK2/046	Understand the principles of military vehicle and equipment maintenance	60	K/617/0088
EOK2/047	Understand the procedures and processes for fault identification on military vehicles and mechanical systems	70	D/617/0086
EOK2/048	Motorsport Engineering Techniques	60	J/506/3278
EOK2/049	Motorsport Engineering Principles	60	M/506/3291
EOK2/050	Principles and Operation of Motorsport Engine Ancillaries and Operating Systems	50	A/506/3293
EOK2/051	Function, Operation and Inspection of Motorsport Vehicle Electrical Systems and Components	50	F/506/3294
EOK2/052	Preparation of a Motorsport Vehicles Chassis System	50	J/506/3295

Optional units - Continued

EAL Code	Unit Title	GL(Hrs)	Ofqual Code
EOK2/053	Function and Inspection of a Motorsport Vehicle Braking Systems	50	L/506/3296
EOK2/054	Inspecting Motorsport Vehicles During an Event	50	R/506/3297
EOK2/055	Motorsport Vehicle Transmission Principles and Operation	50	Y/506/3298

Barred Combination/s:

If either unit EOK2/019 or unit EOK2/020 is chosen, the learner cannot choose unit EOK2/021.

If unit EOK2/021 is chosen, the learner cannot choose unit EOK2/019 or EOK2/020.

If either unit EOK2/022 or EOK2/023 is chosen, the learner cannot choose unit EOK2/024.

If unit EOK2/024 is chosen, the learner cannot choose unit EOK2/022 or EOK2/023.

Unit EOK2/002 and unit EOK2/048 cannot be chosen together

Unit EOK2/003 and unit EOK2/049 cannot be chosen together.

5.0 Profiles and requirements

The staff involved in the delivery of these qualifications at the Centre must meet ALL of the requirements in this section.

5.1 Staff responsible for registering and certificating learners

Centres are required to appoint a suitable member of staff who can take responsibility for registering learners onto the qualification, submitting entries for externally set assessments to EAL, and taking receipt of external assessment procedures. They may also be responsible for applying to EAL for learner certificates. The role may be undertaken by the same person who undertakes quality assurance (see Section 5.4).

5.2 Teaching staff

Teaching staff must have knowledge and understanding of:

- The occupations covered by this qualification.
- The qualification structure and content.
- The learning outcomes and assessment criteria they are delivering.

It is a recommendation that teaching staff will:

- Have 2 years' experience in teaching/training
or
- Be working towards an appropriate teaching/training qualification
or
- Hold an appropriate teaching/training qualification (e.g. Cert Ed or Learning and Development trainer units).

5.3 Assessors

The Centre MUST provide EAL with the names of any teachers, trainers or other individuals who will undertake internal assessment, so that these can be approved prior to them carrying out an assessment role.

Internal Assessors must:

- Have knowledge and understanding of the assessment criteria they are assessing.
- Have knowledge and understanding of the qualification structure, content and assessment components.
- Understand the assessment process.

It is a recommendation that teaching staff will:

- Have 2 years' experience in assessment (e.g. within an N/SVQ or teaching/training environment)
or
- Be working towards an appropriate assessment qualification, such as the 'Level 3 Award in Assessing Vocationally Related Achievement'
or
- Hold an appropriate assessment qualification (as above).

Internal Assessors that hold either 'D' or 'A' units must also have evidence of Continuing Professional Development (CPD) to demonstrate compliance with the current Assessor standards.

Note: 'Candidate Assessors' who are working towards their Assessor qualifications and who do not have the requisite 2 years' experience must be supervised by a Qualified Assessor. Candidate Assessors must have a clear action plan for achieving the Assessor qualification(s). Assessor approval will be withdrawn if a relevant qualification has not been attained within 18 months.

Assessor continuing professional development

The occupational competence of assessors must be updated on a regular basis and be periodically confirmed via continuing professional development (CPD) via the Assessment Centre. Evidence of CPD will be sought by the External Quality Assurer for all approved Assessors at the Centre.

It is the responsibility of each assessor to identify and make use of opportunities for CPD, such as industry conferences, access to trade journals, and Professional Body/Trade Association events, at least on an annual basis to enhance and upgrade their professional development and technical knowledge. It is imperative that records are kept of all such CPD opportunities/occasions and that they provide evidence of cascading such technical knowledge and industry intelligence to all relevant colleagues.

5.4 Quality assurance staff

This relates to staff undertaking internal verification of assessment. The Centre MUST provide EAL with the names of any teachers, trainers or other individuals who will undertake internal quality assurance, so that these can be approved prior to them carrying out this role.

The main focus of internal quality assurance for this qualification is:

- The quality assurance of assessment procedures, including standardisation of assessment practice across different assessors within the Centre.
- Internal standardisation of marking and moderation of learner marks awarded for the final synoptic assessment.

Internal quality assurance staff must:

- Be familiar with the occupation(s) covered by this qualification.
- Have knowledge and understanding of the qualification structure and content.
- Understand the assessment process and the role of quality assurance.

Internal quality assurance staff must also:

- Have experience in quality management/internal verification.
- or**
- Hold an appropriate qualification, such as 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'

It is a recommendation that quality assurance staff have access to relevant 'occupational expertise', which will enable them to conduct their quality assurance role appropriately.

Continuing professional development of internal quality assurance staff

The occupational experience of quality assurance staff must be updated on a regular basis and be periodically confirmed via continuing professional development (CPD) via the Assessment Centre. This will be quality assured by EAL.

It is the responsibility of each internal quality assurance staff member to identify and make use of opportunities for CPD, such as industry conferences, access to trade journals, and SSC and Professional Body/Trade Association events, at least on an annual basis to enhance and upgrade their professional development and technical knowledge. It is imperative that records are kept of all such CPD opportunities/occasions and that they provide evidence of cascading such technical knowledge and industry intelligence to all relevant colleagues.

5.5 Staff invigilating on-screen examinations

Members of staff with responsibility for invigilating on-screen examinations must know, understand and comply with the Procedures for Conducting the Exam Component within EAL Qualifications' (EAF 1), which are published by EAL. These members of staff must also:

- Have experience in conducting and controlling exam sessions.
- or**
- Be supervised by an individual experienced in conducting and controlling exam sessions.

Note: A teacher/tutor who has prepared the learners for the subject of the exam must not be the sole supervisor at any time during an exam for that subject(s).

5.6 Learners with particular requirements

There are no formal entry requirements for these qualifications; however centres should ensure that the learners have the potential to achieve these qualifications. Learners must have the minimum levels of literacy and numeracy to complete the learning outcomes and the external assessment.

Centres should make learners with particular requirements aware of the content of the qualification and they should be given every opportunity to successfully complete the qualification. EAL will consider any reasonable suggestions for, and from, those with disabilities that would help them to achieve the learning outcomes without compromising the standards required.

5.7 Age restrictions

Learners must be at least 16 years old.

6.0 Assessment

The following table indicates the assessment components that are included in the qualification/s and for each component:

- Who is responsible for setting and marking the component.
- How the component is quality assured.

Assessment component	Set by	Marked by	Method of quality assurance	
			Internal	External
On-screen examination ¹	EAL	EAL	Examination invigilation	Verification and continuous monitoring via EQA visits
Centre marked practical/ theory assessments ²	EAL	Centre	On-going standardisation within the Centre	Verification and continuous monitoring via EQA visits

1. Refer to Section 6.1 External Assessment.

2. Refer to Section 6.2 Internal (EAL Set and Centre Marked) Assessments.

The learner must pass **ALL** assessments to achieve the qualification.

A breakdown showing the assessment requirements for each unit is shown in the table below:

EAL code	Unit title	On-screen exam	Centre marked practical/theory assessment
EOK2/001	Engineering environment awareness	YES	YES
EOK2/002	Engineering techniques	YES	YES
EOK2/003	Engineering mathematics and science principles	YES	YES
EOK2/004	Electrical and electronic principles	NO	YES
EOK2/005	Electrical and electronic testing methods	NO	YES
EOK2/006	Electrical and electronic systems and devices	NO	YES
EOK2/007	Fabrication and welding principles	NO	YES
EOK2/008	Manual welding techniques	NO	YES
EOK2/009	Producing components from metal plate	NO	YES
EOK2/010	Producing components from sheet metal	NO	YES
EOK2/011	Sheet metalwork technology	NO	YES
EOK2/012	Non-fusion thermal joining methods	NO	YES
EOK2/013	Thermal cutting techniques	NO	YES
EOK2/014	Engineering maintenance safety practices	NO	YES
EOK2/015	Engineering maintenance techniques	NO	YES
EOK2/016	Engineering maintenance planning	NO	YES
EOK2/017	Engineering materials processes	NO	YES
EOK2/018	Fitting and assembly techniques	NO	YES
EOK2/019	Manual turning techniques	NO	YES
EOK2/020	Manual milling techniques	NO	YES
EOK2-021	Principles of turning & milling	NO	YES
EOK2/022	Computer numerical control turning techniques	NO	YES
EOK2/023	Computer numerical control milling techniques	NO	YES
EOK2/024	Principles of Computer Numerical Control (CNC) machining /fabrication	NO	YES

EAL code	Unit title	On-screenexam	Centre marked practical/theory assessment
EOK2/025	Grinding techniques	NO	YES
EOK2/026	Electrical installation methods, wiring and circuit protection	NO	YES
EOK2/027	Basic electrical circuit inspection, testing and fault diagnosis	NO	YES
EOK2/028	Building services pipework fixing, bending and jointing methods	NO	YES
EOK2/029	Building services engineering pipework fabrication processes and techniques	NO	YES
EOK2/030	Building services pipework systems	NO	YES
EOK2/031	Building services engineering systems and their layout requirements	NO	YES
EOK2/032	Installation and servicing of refrigeration equipment	NO	YES
EOK2/033	Installation and servicing of air-conditioning equipment	NO	YES
EOK2/034	Installation of security systems	NO	YES
EOK2/035	Security installation design	NO	YES
EOK2/036	Understanding Computer Aided Drawing (CAD)	NO	YES
EOK2/037	Applied mathematics in engineering	NO	YES
EOK2/038	Business improvement techniques	NO	YES
EOK2/039	Leading a team in engineering	NO	YES
EOK2/040	Plan and carry out a project in engineering	NO	YES
EOK2/041	Engineering manufacturing techniques	NO	YES
EOK2/042	Engineering design techniques	NO	YES
EOK2/043	Marketing an engineering product	NO	YES
EOK2/044	Additive manufacturing (3D printing)	NO	YES
EOK2/045	Understand effective working practices in an engineering environment when working on military vehicles and equipment	NO	YES
EOK2/046	Understand the principles of military vehicle and equipment maintenance	NO	YES
EOK2/047	Understand the procedures and processes for fault identification on military vehicles and mechanical systems	NO	YES
EOK2/048	Motorsport Engineering Techniques	NO	YES
EOK2/049	Motorsport Engineering Principles	NO	YES
EOK2/050	Principles and Operation of Motorsport Engine Ancillaries and Operating Systems	NO	YES
EOK2/051	Function, Operation and Inspection of Motorsport Vehicle Electrical Systems and Components	NO	YES
EOK2/052	Preparation of a Motorsport Vehicles Chassis System	NO	YES
EOK2/053	Function and Inspection of a Motorsport Vehicle Braking Systems	NO	YES
EOK2/054	Inspecting Motorsport Vehicles During an Event	NO	YES
EOK2/055	Motorsport Vehicle Transmission Principles and Operation	NO	YES

6.1 External assessment

External assessment comprises an externally set and marked on-screen multiple-choice examination, which has been designed to assess the knowledge and understanding in the core mandatory unit.

A specification for the examination, indicating the number of questions to be set for each learning outcome is provided in Appendix 1.

Key Points

- The external examination is available on demand.
- The examination must be undertaken by the learner under controlled examination conditions, in accordance with EAL's Procedures for Conducting the Exam Component within EAL Qualifications' (EAF 1).
- The EAL co-ordinator within the Centre will assume responsibility for liaison and correspondence regarding the external assessment component.
- Centres will be sampled and spot checks will be carried out by EAL to ensure examinations are delivered in accordance with EAL published procedures.

Re-taking externally set and marked on-line examinations

Learners who fail to achieve a pass will be permitted to re-take this examination after feedback and appropriate tuition has taken place.

The re-sits for externally set and marked examinations will be subject to the current published charges.

Practice papers

A practice paper is available to learners, which can be accessed via the EAL website (see Section 2.4). The practice paper is not part of the formal assessment arrangements and marks from this paper will therefore NOT count towards the qualification.

6.2 Internal assessment

Internal assessment includes practical and/or theory assessments, which have been designed to assess the knowledge, understanding and skills of learners for individual units. The internal assessment for each unit is set by EAL and marked by members of the delivery team at the Centre. All assessment decisions are then subject to internal standardisation and external quality assurance.

Internal assessments involve collecting and evaluating evidence that demonstrates achievement of the learning outcomes in each unit. The internal assessments are accompanied by marking criteria, checklists and other materials to ensure that the delivery team is consistent in their approach to internal assessments across learners. The internal assessments and the accompanying marking/assessment criteria can be found in the individual units within the Delivery and Learner Assessment Packs. Centres are responsible for ensuring that internal assessments are suitably controlled to ensure that assessment decisions are valid and reliable, and that work submitted for assessment by learners is prepared and produced by them independently, without assistance from others, and free of plagiarism.

Where the assessment takes the form of written/short answer or multiple choice question papers, these should be treated as controlled assessments therefore imposing the necessary restrictions on the learner, as necessary. Guidance sheets have also been created to hand out to the learners, to ensure they are aware how to complete the multiple choice and short answer questions papers.

All learning outcomes of the qualification must be assessed. In order to help meet this requirement it is advised that learners should produce a logbook/portfolio where they can file and make reference to evidence that shows their achievements against the learning outcomes. Centres should also maintain an assessment and feedback record for each learner, which details the evidence evaluated against the learning outcome and the feedback given to the learner. These records must be available to the External Quality Assurer.

Further guidance on assessment is provided within each unit Delivery Pack.

Re-taking internal assessments

Learners who fail to achieve a pass in the internally marked controlled assessments will be permitted to re-take after feedback and appropriate tuition has taken place.

Standardisation of internal assessments

Members of the internal quality assurance team at the Centre have an important role to play in ensuring that internal assessment is standardised. In particular, they should work with tutor/assessors to ensure that the correct procedures are being followed at all times, and to ensure that assessment decisions taken by different assessors are consistent, fair and reliable. Key activities will include:

- Meeting with tutor/assessors (individually and collectively) throughout the course to discuss quality assurance and standardisation issues and provide support and guidance where needed.
- Observing tutor/assessors and giving them feedback to help improve their assessment technique.
- Sampling learner evidence across different learner cohorts to ensure that appropriate standards have been met.
- Arranging cross-marking of learner work to compare results and agree benchmarks.

7.0 External quality control of assessment

There are two major activities in which EAL interacts with the Centre in relation to the External Quality Control of Assessment for this qualification and these are:

- **Recognition:** When a Centre decides to offer the qualification, the EAL External Quality Assurer (EQA) ensures that the Centre is suitably equipped and prepared for delivery and assessment.
- **Engagement:** Throughout the ongoing delivery of the qualification EAL, through EQA monitoring and other mechanisms will review the quality and consistency of assessment and internal quality assurance and recommend actions to address issues of concern.

Recognition

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

- Meets any procedural requirements specified by EAL.
- 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 (including, where appropriate, scope for involving employers).

EAL may decide to visit the Centre to view the evidence provided.

Engagement

EAL, through EQA Engagement and other mechanisms will ensure that:

- A strategy is developed and deployed for the on-going monitoring of the centre – this will be based on an active risk assessment of the Centre, and will include details of the learner, assessor and internal quality assurer's sampling strategy and the rationale behind this.
- The Centre's internal quality assurance processes are effective in learner assessment.
- Outcomes of internal assessment are verified, through sampling, to ensure standards are being maintained.
- Sanctions are applied to a Centre where necessary and that corrective actions are taken by the Centre and monitored by the EQA.
- Reviews of EAL's external auditing arrangements are undertaken.

Appendix 1: Examination specifications

Unit: EOK2/001 - Engineering environmental awareness

Assessment type: Multiple choice

Number of questions: 16

Time allowed: 32 minutes

The examination will cover the knowledge learning outcomes of the units as follows:

N°	LO title	N° of questions
1.1	Understand the requirements of an engineering organisation in meeting health and safety legislation and regulations	6
1.2	Understand the roles and responsibilities of both employers and employees in the continuous development of skills and working relationships	5
1.3	Understand the internal and external environments associated with the operations of an engineering organisation	5

Unit: EOK2/002 - Engineering techniques

Assessment type: Multiple choice

Number of questions: 16

Time allowed: 32 minutes

The examination will cover the knowledge learning outcomes of the units as follows:

N°	LO title	N° of questions
1.1	Understand forms of communication used within engineering	3
1.2	Understand the engineering applications of IT and ICT	4
1.3	Understand the basic tools and techniques used in engineering	5
1.4	Understand measurement and marking out techniques	4

Unit: EOK2/003 - Engineering mathematics and science principles

Assessment type: Multiple choice

Number of questions: 16

Time allowed: 32 minutes

The examination will cover the knowledge learning outcomes of the units as follows:

N°	LO title	N° of questions
1.1	Understand how to select engineering materials	4
1.2	Understand material properties and heat treatment processes	3
1.3	Understand fundamental numeracy applied to engineering	4
1.4	Understand fundamental science applied to engineering	5

NOTE: The pass mark for the examinations are normally expected to be around 60%.

Appendix 2: Learners registration and certification

Learners must be registered on the qualification using a specific qualification code.

Using this code will ensure the learners receive the correct materials.

The registration codes for these qualifications are:

Qualification title	Code
EAL Level 2 Certificate in Engineering Operations (Knowledge)	603/3194/X
EAL Level 2 Diploma in in Engineering Operations (Knowledge)	603/3195/1

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