Part of the Enginuity Group

Qualification Specification

EAL Level 3 Diploma in Providing Electronic Fire and Security Systems

Qualification code: 603/6618/7

Issue 1

www.eal.org.uk

CLOSER TO INDUSTRY

Contents

1.0 About EAL

Since 1964 EAL (Excellence, Achievement and Learning) has been awarding 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, employer 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 learners to have equal access to training and assessment for qualifications in line with equalities legislation. 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

Note: Where learners taking the qualification in a region where legislation, organisations, regulations detailed does not apply, relevant legislation should be substituted. For example: The Health and Safety at Work etc. Act 1974 shall be substituted in Northern Ireland by The Health and Safety at Work (Northern Ireland) Order 1978.

1.2 Customer experience 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 Experience team:

EAL Customer Experience:
Tel: +44 (0)1923 652 400
Email: customer.experience@eal.org.uk

2.0 Introduction to the qualification

What is the purpose of this qualification?

This qualification is for learners who wish to embark on a career in providing and installing fire or security systems or for those already working in the industry who require a formal qualification to facilitate progression to becoming industry recognised in their role. The content of this qualification was created from working with employers, their representatives and Skills for Security, the sector body.

Who is this qualification for?

This qualification is for those who are new to the industry and those already in the industry who wish to gain a formal qualification and industry recognition in their occupation.

What does this qualification cover?

This qualification comprises of units with knowledge and performance outcomes covering the design, installation, testing, commissioning, maintenance and auditing for the electronic systems used by both the Fire and Security sectors.

This qualification has been designed with two pathways to enable the learner to select their discipline. Pathway 1 allows a learner to specialise in electronic systems used in fire detection and alarm systems. Pathway 2 allows a learner to specialise in security systems such as Intruder alarms, CCTV installation and access control systems.

Learners will also cover topics including health and safety, planning and overseeing electrical work, scientific principles for systems and networking and signaling for systems.

This qualification is graded pass or refer only. This qualification has 690 Guided Learning Hours (GLH). It has a Total Qualification Time (TQT) 1020 hours which is the notational time required by the learner to complete the qualification.

2.1 Accreditation and industry support for this qualification

This qualification is:

- regulated at Level 3
- supported by the fire and security industry stakeholders.

2.2 Achievement of qualification

The EAL Level 3 Diploma in Providing Electronic Fire and Security Systems has been designed with two pathways.

Learners following Pathway 1 (Fire) will be required to complete a total of 11 units comprising of the 4 Mandatory Units plus the 7 Mandatory units for Pathway 1 in order to achieve this qualification. The overall grading type for this qualification is Pass/Fail.

Learners following Pathway 2 (Security) will be required to complete a total of 14 units comprising of the 4 Mandatory Units plus the 10 Mandatory units for Pathway 2 in order to achieve this qualification. The overall grading type for this qualification is Pass/Fail.

For further information on the Rules of Combination please see Section 4.

The EAL Level 3 Diploma in Providing Electronic Fire and Security Systems is gained when all the necessary units for the learner's chosen pathway have been achieved. The centre will then be able to apply for the learner's certificate of achievement. The learner will also receive a certificate of unit credit, listing all the units they have achieved.

If learners do not complete the full qualification, they can still claim a certificate of unit credit for the units achieved. This will mean that they will still have proof of their ability and could complete one of the qualifications at a later date.

Units can also be taken individually (stand-alone units). 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.

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

EAL Customer Experience:
Tel: +44 (0)1923 652 400
Email: customer.experience@eal.org.uk

2.3 Qualification support materials

The following support materials are available for this qualification:

- Delivery packs
- Learner assessment packs.

3.0 Centre and qualification approval

Centres wishing to deliver the EAL Level 3 Diploma in Providing Electronic Fire and Security Systems will need to comply with this manual and EAL's centre recognition 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:

To add the EAL Level 3 Diploma in Providing Electronic Fire and Security Systems qualification 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 Experience Team who will be delighted to hear from you:

EAL Customer Experience:
Tel: +44 (0)1923 652 400
Email: customer.experience@eal.org.uk

4.0 Qualification specific information

4.1 Rule of combination (qualification structure)

To achieve this qualification learners are required to obtain the 4 mandatory units plus the number of mandatory pathway units identified in the selected pathway. Learners will be assessed against their chosen sector:
Pathway 1: Fire detection and alarm systems
Pathway 2: Security systems (intruder, CCTV and access control)

This qualification has **690** Guided Learning Hours (GLH) and it has a Total Qualification Time (TQT) of **1020** hours which is the notional time required by the learner to complete the qualification.

EAL Level 3 Diploma in Providing Electronic Fire and Security Systems

Mandatory Units: (All pathways)
All **FOUR** units must be completed:

EAL code	Unit title	Level	GLH	Ofqual code
PEFS3/001	Understand health, safety and environmental considerations	3	65	A/618/4612
PEFS3/002	Electronic scientific principles for electronic security or fire detection and alarm systems	3	90	F/618/4613
PEFS3/003	Understand how to plan and oversee electrical work activities	3	40	J/618/4614
PEFS3/004	Introduction to networking and signaling principles for electronic security or fire detection and alarm systems	3	80	L/618/4615

Mandatory Pathway Units:
Pathway 1: Fire detection and alarm systems
All **SEVEN** units must be completed:

EAL code	Unit title	Level	GLH	Ofqual code
PEFS3/005	Understand the engineering principles in the design and installation of a fire detection and alarm systems	3	200	R/618/4616
PEFS3/006	Apply installation practices and procedures for fire detection and alarm systems	3	40	Y/618/4617
PEFS3/007	Understand inspection, testing, commissioning and handover for fire detection and alarm systems	3	70	D/618/4618
PEFS3/008	Apply inspection, testing, commissioning and handover for fire detection and alarm systems	3	15	H/618/4619
PEFS3/009	Understand fault diagnosis, rectification and maintenance and auditing for fire detection and alarm systems	3	50	Y/618/4620

PEFS3/010	Apply fault diagnosis, rectification maintenance and auditing for fire detection and alarm systems	3	15	D/618/4621
PEFS3/011	Demonstrate full installation, testing, commissioning, maintenance and handover of an electronic fire detection and alarm system	3	25	H/618/4622

Mandatory Pathway Units:
Pathway 2: Security systems (intruder, CCTV and access control)
All **TEN** units must be completed:

EAL code	Unit title	Level	GLH	Ofqual code
PEFS3/012	Understand and apply design and installation practices and procedures for intruder security systems	3	60	K/618/4623
PEFS3/013	Understand installation practices and procedures for intruder security systems	3	30	M/618/4624
PEFS3/014	Understand and apply inspection, takeover, testing, commissioning, handover and faults for intruder security systems	3	140	L/618/4629
PEFS3/015	Understand and apply design and installation practices and procedures for CCTV security systems	3	30	T/618/4625
PEFS3/016	Understand installation practices and procedures for CCTV security systems	3	20	A/618/4626
PEFS3/017	Understand and apply inspection, takeover, testing, commissioning, handover and faults for CCTV security systems	3	60	F/618/4661
PEFS3/018	Understand and apply design and installation practices and procedures for access control security systems	3	30	F/618/4627
PEFS3/019	Understand installation practices and procedures for access control security systems	3	20	F/618/4630
PEFS3/020	Understand and apply inspection installation, testing, commissioning, handover and faults for access control security systems	3	60	J/618/4662
PEFS3/021	Demonstrate full installation, testing, commissioning, maintenance and handover of an electronic security system	3	25	J/618/4628

4.2 Unit endorsement

Learners will be assessed in relation to their chosen discipline and endorsed accordingly. The endorsement will be printed on the certificate to show future employers which discipline was covered during their assessment. All units must be assessed against **all** the mandatory units and **one** of the following endorsements:

- Pathway 1: Fire detection and alarm systems
- Pathway 2: Security systems (intruder, CCTV and access control)

4.3 Barred units

There are no barred units.

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 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.

Teaching staff will also:

- 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 (referred to as assessors), so that these can be approved prior to them carrying out an assessment role.

Assessors must have:

- A minimum of 2 years occupational experience within the area they are assessing
- Knowledge and understanding of the assessment criteria they are assessing
- Knowledge and understanding of the qualification structure, content and assessment components
- Understand the assessment process.

Assessors will also:

- Have 2 years' experience in assessment of knowledge-based qualifications

or

- Be working towards an appropriate assessment qualification, such as the 'Level 3 Award in Assessing Vocationally Related Achievement'.
  (Note: 'Candidate assessors' who are working towards their assessor qualifications must be countersigned 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.)
  or
- Hold an appropriate assessment qualification (as above).

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.

There will be instances where the teaching staff will also take on the role of the internal assessors. In such cases, the member of staff must be able to demonstrate that they satisfy the requirements of both teaching staff and assessor criteria as listed above.

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 quality assurance 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 quality assurance

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

Entry requirements
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

Learners must have obtained Essential Skills in:

- Application of Number Level 2
- Communication Level 2
- ICT Level 2.

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 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]	Centre	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 Assessments.

The learner must pass **ALL** assessments within their chosen pathway 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
PEFS3/001	Understand health, safety and environmental considerations	YES	YES
PEFS3/002	Electronic scientific principles for electronic security or fire detection and alarm systems	YES	NO
PEFS3/003	Understand how to plan and oversee electrical work activities	YES	NO
PEFS3/004	Introduction to networking and signalling principles for electronic security or fire detection and alarm systems	YES	NO
PEFS3/005	Understand the engineering principles in the design and installation of a fire detection and alarm systems	YES	YES
PEFS3/006	Apply installation practices and procedures for fire detection and alarm systems	NO	YES
PEFS3/007	Understand inspection, testing, commissioning and handover for fire detection and alarm systems	YES	NO
PEFS3/008	Apply inspection, testing, commissioning and handover for fire detection and alarm systems	NO	YES
PEFS3/009	Understand fault diagnosis, rectification and maintenance and auditing for fire detection and alarm systems	YES	NO
PEFS3/010	Apply fault diagnosis, rectification maintenance and auditing for fire detection and alarm systems	NO	YES
PEFS3/011	Demonstrate full installation, testing, commissioning, maintenance and handover of an electronic fire detection and alarm system	NO	YES
PEFS3/012	Understand and apply design and installation practices and procedures for intruder security systems	YES	YES

EAL code	Unit title	On-screen exam	Centre marked practical/theory assessment
PEFS3/013	Understand installation practices and procedures for intruder security systems	YES	NO
PEFS3/014	Understand and apply inspection, takeover, testing, commissioning, handover and faults for intruder security systems	YES	YES
PEFS3/015	Understand and apply design and installation practices and procedures for CCTV security systems	YES	YES
PEFS3/016	Understand installation practices and procedures for CCTV security systems	YES	NO
PEFS3/017	Understand and apply inspection, takeover, testing, commissioning, handover and faults for CCTV security systems	YES	YES
PEFS3/018	Understand and apply design and installation practices and procedures for access control security systems	YES	YES
PEFS3/019	Understand installation practices and procedures for access control security systems	YES	NO
PEFS3/020	Understand and apply inspection installation, testing, commissioning, handover and faults for access control security	YES	YES
PEFS3/021	Demonstrate full installation, testing, commissioning, maintenance and handover of an electronic security system	NO	YES

Assessment guidance for centres

Practical assessments
Where the unit has a practical assessment, Centres will be able to set and deliver their own assessment against the specification provided in the Delivery Packs. These practical assessments will prepare the learner to take the final synoptic assessment once all the learning has been successfully completed.

Final synoptic assessment
This qualification has been designed with a final synoptic assessment that will test the learner's ability to demonstrate a complete build of an electronic fire detection and alarm or security system. The assessment will be Centre set and marked against the specification provided. This will allow the Centre to design an assessment that will accommodate their facilities.

The table below indicates which synoptic assessment must be used dependent on the learner's chosen pathway:

Pathway	Synoptic Unit Number	Unit title
Fire detection and alarm systems	PEFS3/011	Demonstrate full installation, testing, commissioning, maintenance and handover of an electronic fire detection and alarm system
Security systems	PEFS3/021	Demonstrate full installation, testing, commissioning, maintenance and handover of an electronic security system

Knowledge assessments
For the purpose of this qualification there are combined examinations. The table below shows the units and the knowledge assessment that the learner will sit.

Element:	Unit number:	Unit title:	Knowledge assessment to be taken:
CORE	PEFS3/001	Understand health, safety and environmental considerations.	**CORE 1** (H&S, Planning & Overseeing work)
	PEFS3/003	Understand how to plan and oversee electrical work activities.	
	PEFS3/002	Electronic scientific principles for electronic security or fire detection and alarm systems.	**CORE 2** (Scientific principles and Networking/signalling)
	PEFS3/004	Introduction to networking and signalling principles for electronic security or fire detection and alarm systems.	
FIRE	PEFS3/005	Understand the engineering principles in the design and installation of a fire detection and alarm systems.	**PEFS3/005** (Design/Install)
	PEFS3/007	Understand inspection, testing, commissioning and handover for fire detection and alarm systems.	**PEFS3/007** (Test, Commission, Handover)
	PEFS3/009	Understand fault diagnosis, rectification and maintenance and auditing for fire detection and alarm systems.	**PEFS3/009** (Fault/Maintenance/Audit)
SECURITY	PEFS3/012	Understand and apply design and installation practices and procedures for intruder security systems.	**SECURITY 1** (Intruder)
	PEFS3/013	Understand installation practices and procedures for intruder security systems.	
	PEFS3/014	Understand and apply inspection, takeover, testing, commissioning, handover and faults for intruder security systems.	
	PEFS3/015	Understand and apply design and installation practices and procedures for CCTV security systems.	**SECURITY 2** (CCTV)
	PEFS3/016	Understand installation practices and procedures for CCTV security systems.	
	PEFS3/017	Understand and apply inspection, takeover, testing, commissioning, handover and faults for CCTV security systems.	
	PEFS3/018	Understand and apply design and installation practices and procedures for access control security systems.	**SECURITY 3** (ACCESS CONTROL)
	PEFS3/019	Understand installation practices and procedures for access control security systems.	
	PEFS3/020	Understand and apply inspection installation, testing, commissioning, handover and faults for access control security systems.	

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 unit.

Key points

- 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 examinations
Learners who fail to achieve a pass or deemed to have underperformed in the externally set and marked examination 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.

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 and marked by members of the delivery team at the Centre based on the specification issued by EAL . 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.

For each pathway there is a synoptic practical assessment that the learner must successfully complete in order to pass the qualification. The synoptic practical assessment will confirm the learner's competence in being able to carry out a full installation of either a fire detection and alarm system or a complete security system. The learner may only complete the synoptic practical assessment after all training and learning has been completed and the learner is prepared to take the assessment. The assessments have been designed as a series of tasks, to be completed in order or as specified, ensuring all stages of installation, testing, commissioning and handover meet industry guidelines and codes of practice. See section 6.0 for further information.

The internal assessment for each synoptic practical unit is set by and marked by members of the delivery team at the Centre based on the specification issued by EAL . All assessment decisions are then subject to internal standardisation and external quality assurance.

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

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.

8.0 Marking and grading

The grading for this qualification is either a PASS or REFER.

Learners must achieve a Pass in ALL components for the qualification to be awarded.

If learners are unsuccessful in one or more of the assessment components, then the overall result for the qualification will be referred and a certificate will not be awarded.

If a learner is referred the learner must be given feedback to enable the learner to understand those areas of skill, knowledge or understanding which need further training.

Appendix 1: Qualification marking templates

EAL Level 3 Diploma in Providing Electronic Fire and Security Systems
Pathway 1: Fire detection and alarm systems

Learner name:			
Assessor name:			
Unit code	**Unit title**	**Mark**	
		Pass	**Refer**
PEFS3/001	Understand health, safety and environmental considerations		
PEFS3/002	Electronic scientific principles for electronic security or fire detection and alarm systems		
PEFS3/003	Understand how to plan and oversee electrical work activities		
PEFS3/004	Introduction to networking and signalling principles for electronic security or fire detection and alarm systems		
PEFS3/005	Understand the engineering principles in the design and installation of a fire detection and alarm systems		
PEFS3/006	Apply installation practices and procedures for fire detection and alarm systems		
PEFS3/007	Understand inspection, testing, commissioning and handover for fire detection and alarm systems		
PEFS3/008	Apply inspection, testing, commissioning and handover for fire detection and alarm systems		
PEFS3/009	Understand fault diagnosis, rectification and maintenance and auditing for fire detection and alarm systems		
PEFS3/010	Apply fault diagnosis, rectification maintenance and auditing for fire detection and alarm systems		
PEFS3/011	Demonstrate full installation, testing, commissioning, maintenance and handover of an electronic fire detection and alarm system		
	Final mark:		

ALL units must achieve a pass for a certificate to be claimed.

Assessor signature:		Date:	
Learner signature:		Date:	
IQA signature (if sampled):		Date:	

EAL Level 3 Diploma in Providing Electronic Fire and Security Systems
Pathway 2: Security systems (intruder, CCTV and access control)

Learner name:			
Assessor name:			
Unit code	**Unit title**	**Mark**	
		Pass	**Refer**
PEFS3/001	Understand health, safety and environmental considerations		
PEFS3/002	Electronic scientific principles for electronic security and fire detection and alarm systems		
PEFS3/003	Understand how to plan and oversee electrical work activities		
PEFS3/004	Introduction to networking and signalling principles for electronic security or fire detection and alarm systems		
PEFS3/012	Understand and apply design and installation practices and procedures for intruder security systems		
PEFS3/013	Understand installation practices and procedures for intruder security systems		
PEFS3/014	Understand and apply inspection, takeover, testing, commissioning, handover and faults for intruder security systems		
PEFS3/015	Understand and apply design and installation practices and procedures for CCTV security systems		
PEFS3/016	Understand installation practices and procedures for CCTV security systems		
PEFS3/017	Understand and apply inspection, takeover, testing, commissioning, handover and faults for CCTV security systems		
PEFS3/018	Understand and apply design and installation practices and procedures for access control security systems		
PEFS3/019	Understand installation practices and procedures for access control security systems		
PEFS3/020	Understand and apply inspection installation, testing, commissioning, handover and faults for access control security systems		
PEFS3/021	Demonstrate full installation, testing, commissioning, maintenance and handover of an electronic security system		
	Final mark:		

ALL units must achieve a pass for a certificate to be claimed.

Assessor signature:		Date:	
Learner signature:		Date:	
IQA signature (if sampled):		Date:	

Appendix 2: Learners registration and certification

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

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

The registration codes for this qualification are:

Qualification title	**Code**
Level 3 Diploma in Providing electronic fire and security systems	
Pathway 1: Fire detection and alarm systems	603-6618-7-A
Pathway 2: Security systems (intruder, CCTV and access control)	603-6618-7-B

Appendix 3: Unit overviews

Level 3

Understand health, safety and environmental considerations

Unit Code: PEFS3/001

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent understanding health, safety and environmental considerations in a controlled environment.

This unit is to be assessed in context with the learner's chosen discipline, electronic security or fire detection and alarm systems.

The learner must demonstrate their competence in the following areas:

- Understand how relevant legislation applies in the workplace.
- Understand the procedures for dealing with the environmental and health and safety situations in the work environment.
- Be able to demonstrate and understand the procedures for establishing a safe working environment
- Understand the requirements for identifying and dealing with hazards in the work environment.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out practical activities safely and correctly.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Electronic scientific principles for electronic security and fire detection and alarm systems

Unit Code: PEFS3/002

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the knowledge and understanding criteria required in order that the learner can demonstrate that they are competent understanding electronic scientific principles for the electronic security and fire detection and alarm systems industries.

This unit is to be assessed in context with the learner's chosen discipline, electronic security or fire detection and alarm systems.

The learner must demonstrate their competence in the following areas:

- Understand mathematical principles which are appropriate to electrical installation, maintenance and design work
- Understand standard units of measurement used in electrical installation, maintenance and design work
- Understand the relationship between resistance, resistivity, voltage, current and power
- Understand the fundamental principles which underpin the relationship between magnetism and electricity
- Understand the types, applications and limitations of electronic components in electrical systems and equipment
- Understand electrical supply systems
- Understand how different electrical properties can affect electrical circuits, systems and equipment
- Understand the operating principles of electrical components.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the principles behind the technology and equipment and understand and their application and will know about the safety requirements in adequate depth to provide a sound basis when carrying out practical activities.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Understand how to plan and oversee electrical work activities

Unit Code: PEFS3/003

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent understanding how to plan and oversee electrical work activities in a controlled environment.

This unit is to be assessed in context with the learner's chosen discipline, electronic security or fire detection and alarm systems.

The learner must demonstrate their competence in the following areas:

- Understand the requirements for liaising with others when organising and overseeing work activities.
- Understand the requirements for organising and overseeing work programmes.
- Understand the requirements for organising the provision and storage that are required for work activities.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the requirements for organising the work activities and the importance of liaising with others throughout the work. The learner will be able to use this underpinning knowledge and apply it accordingly when carrying out the practical activities.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Introduction to networking and signalling principles for electronic security and fire detection and alarm systems

Unit Code: PEFS3/004

Overview

This vocational qualification unit has been derived by education representatives and employers in the for electronic security and fire detection and alarm systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent understanding networking and signalling principles relating to the electronic security or fire detection and alarm systems.

This unit is to be assessed in context with the learner's chosen discipline, electronic security or fire detection and alarm systems.

The learner must demonstrate their competence in the following areas:

- Understand basic data transmission and information technology systems.
- Understand Internet Protocol (IP) and its application to the electronic fire and security systems industry.
- Understand Communication methods and Signal Transmission systems in the electronic fire and security systems industry.

Their underpinning knowledge will provide a good understanding of applying statutory regulations and organisational safety requirements and procedures. They will understand basic data transmission and IT systems and internet protocol. They will understand how new and established systems communicate with remote centres and how the signals are sent and received. This underpinning knowledge will enable the learner to design, install, commission and maintain networking and signalling equipment and ensure the system is working to full operational performance.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Understand the engineering principles in the design and installation of a fire detection and alarm systems

Unit Code: PEFS3/005

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent understanding the engineering principles in the design and installation of a fire detection and alarm system in a controlled environment.

This unit is to be assessed in context with the learner's chosen discipline, electronic fire detection and alarm systems.

The learner must demonstrate their competence in the following areas:

- Understand the relationship of fire detection and alarm systems to the fire safety industry
- Understand the principles and features of fire detection and alarm competent
- Understand the design principles for a fire detection and alarm system
- Understand how FDA systems communicate internally and externally
- Know how to prepare to install fire detection and alarm systems
- Know how to install containment, cabling and system components for fire detection and alarm systems
- Understand the principles of project management
- Produce system designs and quotations for a fire detection and alarm system.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out the practical activities safely and correctly. The learner will understand how to design a complete system and provide a quote to customers.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Apply installation practices and procedures for fire detection and alarm systems

Unit Code: PEFS3/006

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance criteria required in order that the learner can demonstrate that they are competent understanding how to apply installation practices and procedures for fire detection and alarm systems in a controlled environment.

This unit is to be assessed in context with the learner's chosen discipline, electronic fire detection and alarm systems.

The learner must demonstrate their competence in the following areas:

- Prepare to install fire detection and alarm systems.
- Install fire detection and alarm systems.
- Inspect installation and fully test system operation for fire detection and alarm systems.
- Making good after installing fire detection and alarm systems.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out practical activities safely and correctly.

This unit will provide the learner with an understanding and application of the installation practices and procedures. The learner will understand how to prepare for installation, carry out the installation including installing the cabling and containment systems need to power and send signals to other equipment. Once all devices and equipment have been installed the learner will inspect and test the system to ensure it is installed correctly. The learner will also understand how to rectify and make good any damage to surfaces before handing over an installed system for commissioning.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Understand inspection, testing, commissioning and handover for fire detection and alarm systems

Unit Code: PEFS3/007

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent understanding inspection, testing, commissioning and handover of a fire detection and alarm system in a controlled environment.

This unit is to be assessed in context with the learner's chosen discipline, fire detection and alarm systems.

The learner must demonstrate their competence in the following areas:

- Understand the requirements for completing safe isolation of electrical supplies for a fire detection and alarm system
- Understand the requirements for completing the inspection of fire detection and alarm circuits before being placed into service
- Understand the principles and testing procedures for a fire detection and alarm system and components
- Understand the requirements in relation to the responsibility for the limitation of false alarms and unwanted fire alarm signals
- Understand the handover process.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the requirements of safe isolation of power sources and the importance of carrying out inspections. The learner will be able to take their knowledge and understanding of testing and commissioning and apply it when carrying out practical activities.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Apply inspection, testing, commissioning and handover for fire detection and alarm systems

Unit Code: PEFS3/008

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance criteria required in order that the learner can demonstrate that they are competent applying inspection, testing, commissioning and handover activities in a controlled environment.

This unit is to be assessed in context with the learner's chosen discipline, electronic fire detection and alarm systems.

The learner must demonstrate their competence in the following areas:

- Carry out tests to confirm required system operation
- Carry out systems integration
- Test system communications
- Prepare to handover fire detection and alarm systems
- Demonstrate features and operation of systems to customers
- Complete handover and customer documentation.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out practical activities safely and correctly.

This unit will provide the learner with an understanding and application of the testing and commissioning practices and procedures. The learner will be able to apply inspection and testing to new and existing systems and confirm the required performance of the system. They will test the communications between the system and the network. They will prepare the system for handover to the customer which includes taking the customer through the operation of the system and the documentation that accompanies it. The final stage of the process is to handover the system to the customer with the required documentation.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Understand fault diagnosis, rectification and maintenance and auditing for fire detection and alarm systems

Unit Code: PEFS3/009

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent understanding fault diagnosis, fault rectification and required system maintenance in a controlled environment. The unit also provides an overview of auditing requirements, processes and procedures.

This unit is to be assessed in context with the learner's chosen discipline, electronic fire detection and alarm systems.

The learner must demonstrate their competence in the following areas:

- Understand the methods of surveying new and existing fire detection and alarm systems
- Understand how to maintain a fire detection and alarm system in compliance with BS5839-01 and any other third-party accreditations and understand legal and organisational requirements
- Know how to identify causes of unacceptable system performance
- Explain how to communicate with the customer while rectifying faults
- Explain the responsibilities of the premises management.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the processes and procedures for carrying out preventative maintenance, fault finding and fault rectification. They will understand the importance of clear communication on call outs and maintenance visits and know their responsibilities for premises management. The learner will get an overview of carrying out auditing of an established system and what is expected.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Apply fault diagnosis, rectification maintenance and auditing for fire detection and alarm systems

Unit Code: PEFS3/010

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent applying fault diagnosis and rectification and carrying out preventative maintenance in a controlled environment.

This unit is to be assessed in context with the learner's chosen discipline, electronic fire detection and alarm systems.

The learner must demonstrate their competence in the following areas:

- Identify faults in systems
- Rectify faults in systems
- Liaise with customers during repair visits
- Carry out preventative maintenance on systems
- Undertake component replacement or adjustment and subsequent restoration
- Liaise with customers during service visits.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out practical activities safely and correctly.

This unit will provide the learner with an understanding and application of the fault diagnosis and rectification practices and procedures. The learner will be able to apply fault rectification to new and established systems and return the system to the required performance. They will also carry out preventative maintenance on a system and undertake component replacement or adjustment and restore the system to full operational performance. They will be required to demonstrate effective communication skills.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Demonstrate full installation, testing, commissioning, maintenance and handover of an electronic fire detection and alarm system

Unit Code: PEFS3/011

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance criteria that the learner can demonstrate to show they are competent in applying their practical skills to carry out a full installation of a fire detection and alarm system and carry out all procedures including inspecting, testing, commissioning, handover. They will be required to demonstrate their skills for fault diagnosis and rectification and for applying preventative maintenance. This unit is to be assessed in context with the learner's chosen discipline, electronic fire detection and alarm systems.

The learner must demonstrate their competence in the following areas:

- Prepare to install fire detection and alarm systems
- Install fire detection and alarm systems
- Inspect installation and fully test system operation for fire detection and alarm systems
- Making good after installing fire detection and alarm systems
- Carry out tests to confirm required system operation
- Carry out system integration
- Test system communications
- Prepare to handover fire detection and alarm systems
- Demonstrate features and operation of systems to customers
- Complete handover and customer documentation
- Identify and rectify faults in systems
- Liaise with customers during repair visits
- Carry out preventative maintenance on systems
- Undertake component replacement or adjustment and subsequent restoration
- Complete handover and customer documentation.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out the activities safely and correctly.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Understand and apply design and installation practices and procedures for intruder security systems

Unit Code: PEFS3/012

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent understanding design and installation practices and procedures for Intruder and Hold up Alarm systems and how to apply them in a controlled environment.

This unit is to be assessed in context with the learner's chosen discipline, electronic security systems.

The learner must demonstrate their competence in the following areas:

- Understand the requirements and implementation of risk assessment, surveying, design, and system design proposal of intruder and hold up alarm systems
- Produce system designs and quotations for an intruder and hold up alarm systems
- Understand the principles of intruder alarm detection devices, system components, alarm transmission equipment and control indicating equipment
- Understand the function and operation of control and indicating equipment used in intruder alarm systems
- Understand cabling and cable/equipment installation for intruder and hold up alarm systems
- Understand power supplies employed in intruder and hold up alarm systems
- Understand configuration and administration methods for intruder and hold up alarm systems.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out the activities safely and correctly. The learner will understand how to design a complete security system and provide a quote to customers.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Understand installation practices and procedures for intruder security systems

Unit Code: PEFS3/013

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent understanding installation practices and procedures and the requirements of legislation, regulations and official guidance relating to intruder and hold up alarms.

This unit is to be assessed in context with the learner's chosen discipline, electronic security systems.

The learner must demonstrate their competence in the following areas:

- Understand the application of standards, codes of practice and regulations for the design and installation of intruder and hold up alarm systems
- Understand the application of standards, codes of practice and regulations for intruder alarm detection devices, system components, alarm transmission equipment and control indicating equipment
- Understand planning and project management of system installation
- Understand the requirements for auditing intruder and hold up alarm systems
- Understand power supplies employed in intruder and hold up alarm systems
- Understand configuration and administration methods for intruder and hold up alarm systems.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out the activities safely and correctly.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Understand and apply inspection, takeover, testing, commissioning, handover and faults for intruder security systems

Unit Code: PEFS3/014

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent in understanding and knowing how to apply inspection, takeover, testing, commissioning and hand over processes and procedures of an intruder and hold up alarm system in a controlled environment. This unit is to be assessed in context with the learner's chosen discipline, electronic security systems.

The learner must demonstrate their competence in the following areas:

- Understand the operating principles of intruder alarm detection devices, system components, alarm transmission equipment and control indicating equipment
- Install intruder alarm detection devices, system components, alarm transmission equipment and control indicating equipment
- Apply power supplies to intruder and hold up alarm systems
- Understand configuration and administration methods for intruder and hold up alarm systems
- Understand planning and project management of system installation
- Understand how to commission and handover intruder and hold up alarm systems
- Commission and handover intruder and hold up alarm systems
- Understand the requirements for preventative and corrective maintenance of intruder and hold up alarm systems
- Carry out preventative and corrective maintenance on intruder and hold up alarm systems
- Understand how to prepare for and carry out auditing of intruder and hold up alarm systems.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out the activities safely and correctly.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Understand and apply design and installation practices and procedures for CCTV security systems

Unit Code: PEFS3/015

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent understanding design and installation practices and procedures for Closed Circuit Television (CCTV) systems and how to apply them in a controlled environment.

This unit is to be assessed in context with the learner's chosen discipline, electronic security systems.

The learner must demonstrate their competence in the following areas:

- Understand the requirements and processes of designing and installing CCTV systems
- Understand the requirements and process of CCTV system design, specification and quotation
- Understand the principles of CCTV cameras and lenses
- Understand the principles of CCTV transmission systems and equipment
- Understand the principles of CCTV image display, recording and control equipment
- Understand the principles of planning and managing CCTV projects
- Understand the principles of installing CCTV systems
- Produce system designs and quotations for a CCTV system.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out the activities safely and correctly.

The learner will understand how to design a complete security system and provide a quote to customers.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Understand installation practices and procedures for CCTV security systems

Unit Code: PEFS3/016

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent understanding installation practices and procedures and the requirements of legislation, regulations and official guidance related to Closed Circuit Television systems (CCTV).

This unit is to be assessed in context with the learner's chosen discipline, electronic security systems.

The learner must demonstrate their competence in the following areas:

- Understand the application of standards, codes of practice and regulations for surveying and installing CCTV systems
- Understand the application of standards, codes of practice and regulations for the requirements and process of CCTV system design, specification and quotation
- Understand the application of standards, codes of practice and regulations for the requirements and process of CCTV systems and equipment
- Understand the application of standards, codes of practice and regulations for the requirements of planning and managing CCTV projects
- Understand the application of standards, codes of practice and regulations for the disposal of waste in relation to the installation of CCTV systems.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out the activities safely and correctly.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Understand and apply inspection, takeover, testing, commissioning, handover and faults for CCTV security systems

Unit Code: PEFS3/017

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent in understanding and knowing how to apply inspection, takeover, testing, commissioning and hand over processes and procedures of a Closed Circuit Television system (CCTV) in a controlled environment.

This unit is to be assessed in context with the learner's chosen discipline, electronic security systems.

The learner must demonstrate their competence in the following areas:

- Understand the operating principles of installing, testing, commissioning and handover of CCTV systems
- Install, test and commission CCTV systems
- Understand the principles of maintaining CCTV systems
- Apply the principles of maintaining CCTV systems.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out the activities safely and correctly.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Understand and apply design and installation practices and procedures for access control security systems

Unit Code: PEFS3/018

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent understanding design and installation practices and procedures for access control systems and how to apply them in a controlled environment.

This unit is to be assessed in context with the learner's chosen discipline, electronic security systems.

The learner must demonstrate their competence in the following areas:

- Understand the requirements and implementation of risk assessment, surveying, design, and system design and specification of access control systems
- Produce system designs and quotations for access control systems
- Understand the principles of access control devices and control equipment
- Understand the function and operation of common circuits used in access control systems
- Understand typical system configurations and administration for access control
- Understand planning and project management of access control system installation.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out the activities safely and correctly.

The learner will understand how to design a complete security system and provide a quote to customers.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Understand installation practices and procedures for access control security systems

Unit Code: PEFS3/019

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent understanding installation practices and procedures and the requirements of legislation, regulations and official guidance related to access control systems.

This unit is to be assessed in context with the learner's chosen discipline, electronic security systems.

The learner must demonstrate their competence in the following areas:

- Understand the application of standards, codes of practice and statutory regulations for installation of access control systems
- Understand the application of standards, codes of practice and statutory regulations for access control devices
- Understand the application of standards, codes of practice and statutory regulations for cable installation for access control devices
- Understand the application of standards, codes of practice and statutory regulations for primary and secondary power supplies for access control devices
- Understand typical configuration and administration methods for access control systems
- Understand the application of standards, codes of practice and statutory regulations for commissioning, handover and maintenance of access control devices.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out practical activities safely and correctly.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Understand and apply inspection installation, testing, commissioning, handover and faults for access control security systems

Unit Code: PEFS3/020

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance and knowledge criteria required in order that the learner can demonstrate that they are competent in understanding and knowing how to apply inspection, takeover, testing, commissioning and hand over processes and procedures of an access control system in a controlled environment.

This unit is to be assessed in context with the learner's chosen discipline, electronic security systems.

The learner must demonstrate their competence in the following areas:

- Understand the operating principles and requirements of installing, testing, commissioning and handover of access control systems
- Install, test and commission access control systems
- Understand the requirements and principles of maintaining and servicing access control systems
- Carry out maintenance and servicing on access control system
- Understand the requirements and implementation of auditing of access control systems.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out the activities safely and correctly.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

Level 3

Demonstrate full installation, testing, commissioning, maintenance and handover of an electronic security system

Unit Code: PEFS3/021 EPA

Overview

This vocational qualification unit has been derived by education representatives and employers in the Fire, Emergency and Security Systems sector. This has been designed as part of an overall development programme designed to meet the requirements of the Sector, either through a structured Apprenticeship programme or an upskilling programme.

This unit identifies the performance criteria that the learner can demonstrate to show they are competent in applying their practical skills to carry out a full installation of a security system and carry out all procedures including inspecting, testing, commissioning, handover. They will be required to demonstrate their skills for fault diagnosis and rectification and for applying preventative maintenance.

The security system will include the following elements:

- Intruder and hold up alarm
- Closed Circuit Television (CCTV)
- Access Control.

This unit is to be assessed in context with the learner's chosen discipline, electronic security systems.

The learner must demonstrate their competence in the following areas:

- Prepare to install a complete electronic security system
- Install intruder alarm detection devices, system components, alarm transmission equipment and control indicating equipment
- Apply power supplies to intruder and hold up alarm systems
- Commission and hand over an intruder and hold up alarm system
- Carry out preventative and corrective maintenance of an intruder and hold up alarm system
- Install, test and commission a CCTV system
- Carry out maintenance on a CCTV system
- Install, test and commission an access control system
- Carry out maintenance and servicing on an access control system.

Their underpinning knowledge will provide a good understanding of their work and will provide an informed approach to applying statutory regulations and organisational safety requirements and procedures. They will understand the safety requirements and their application and will know about the safety requirements in adequate depth to provide a sound basis for carrying out the activities safely and correctly.

They will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as strong work ethic, positive attitude, team player, dependability, responsibility, honesty, integrity, motivation and commitment.

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