Pearson BTEC Level 3 Award and Certificate in Compartment Fire Behaviour Training

Specification

BTEC Specialist qualification

For first teaching January 2011

Issue 3

Edexcel, BTEC and LCCI qualifications

Edexcel, BTEC and LCCI qualifications are awarded by Pearson, the UK's largest awarding body offering academic and vocational qualifications that are globally recognised and benchmarked. For further information, please visit our qualifications website at qualifications.pearson.com. Alternatively, you can get in touch with us using the details on our contact us page at qualifications.pearson.com/contactus

About Pearson

Pearson is the world's leading learning company, with 35,000 employees in more than 70 countries working to help people of all ages to make measurable progress in their lives through learning. We put the learner at the centre of everything we do, because wherever learning flourishes, so do people. Find out more about how we can help you and your learners at qualifications.pearson.com

This specification is Issue 3. Key changes are listed in the summary table on the next page. We will inform centres of any changes to this issue. The latest issue can be found on the Pearson website: qualifications.pearson.com

These qualifications were previously known as:

Edexcel BTEC Level 3 Award and Certificate in Compartment Fire Behaviour Training (QCF)

The QNs remain the same.

References to third party material made in this specification are made in good faith. Pearson does not endorse, approve or accept responsibility for the content of materials, which may be subject to change, or any opinions expressed therein. (Material may include textbooks, journals, magazines and other publications and websites.)

All information in this specification is correct at time of publication.

ISBN 9781446949054

-

Summary of Pearson BTEC Level 3 Award and Certificate in Compartment Fire Behaviour Training specification Issue 3 changes

Summary of changes made between previous issue and this current issue	Page/section number
All references to QCF have been removed throughout the specification	
Definition of TQT added	Page 1
Definition of sizes of qualifications aligned to TQT	Page 1
TQT value added	Page 4
QCF references removed from unit titles and unit levels in all units	Page 12
Guided learning definition updated	Page 12

Earlier issue(s) show(s) previous changes.

If you need further information on these changes or what they mean, contact us via our website at: qualifications.pearson.com/en/support/contact-us.html.

BTEC Specialist qualification titles covered by this specification

Pearson BTEC Level 3 Award in Compartment Fire Behaviour Training

Pearson BTEC Level 3 Certificate in Compartment Fire Behaviour Training

Qualifications eligible and funded for post-16-year-olds can be found on the funding Hub. The Skills Funding Agency also publishes a funding catalogue that lists the qualifications available for 19+ funding.

The qualification and unit codes will appear on learners' final certification documentation.

The Qualification Numbers for the qualifications in this publication are:

Pearson BTEC Level 3 Award in Compartment Fire Behaviour Training	600/0403/4
Pearson BTEC Level 3 Certificate in Compartment Fire Behaviour Training	600/0404/6

These qualification titles will appear on learners' certificates. Learners need to be made aware of this when they are recruited by the centre and registered with Pearson.

Welcome to the BTEC Level 3 qualifications in Compartment Fire Behaviour Training

Focusing on the Pearson BTEC Level 3 qualifications in Compartment Fire Behaviour Training

The Pearson BTEC Level 3 Award and Certificate in Compartment Fire Behaviour Training are designed to provide:

- education and training for those working in the fire and rescue services with a responsibility to provide compartment fire training for firefighters
- opportunities for fire instructors in the fire and rescue services to achieve a nationally-recognised, Level 3 vocationally-specific qualification
- the knowledge and understanding those working in the fire and rescue services need to train firefighters in compartment fire behaviour.

Straightforward to implement, teach and assess

Implementing BTECs couldn't be easier. They are designed to easily fit into your curriculum and can be studied independently or alongside existing qualifications, to suit the interests and aspirations of learners. The clarity of assessment makes grading learner attainment simpler.

Engaging for everyone

Learners of all abilities flourish when they can apply their own knowledge, skills and enthusiasm to a subject. BTEC qualifications make explicit the link between theoretical learning and the world of work by giving learners the opportunity to apply their research, skills and knowledge to work-related contexts and case studies. These applied and practical BTEC approaches give all learners the impetus they need to achieve and the skills they require for workplace or education progression.

Recognition

BTECs are understood and recognised by a large number of organisations in a wide range of sectors. BTEC qualifications are developed with key industry representatives and Sector Skills Councils (SSC) to ensure that they meet employer and learner needs. Many industry and professional bodies offer successful BTEC learners exemptions for their own accredited qualifications.

All you need to get started

To help you off to a flying start, we have developed an enhanced specification that gives you all the information you need to start teaching BTEC. This includes:

- a framework of equivalencies, so you can see how these qualifications compare with other Pearson vocational qualifications
- information on rules of combination, structures and quality assurance, so you can deliver the qualification with confidence.
- explanations of the content's relationship with the learning outcomes
- guidance on assessment, and what learners must produce to achieve the unit.

Don't forget that we are always here to offer curriculum and qualification updates, local training and network opportunities, advice, guidance and support.

Contents

What are BTEC Level 3 Specialist qualifications?

BTEC Specialist qualifications are work-related qualifications available from Entry to Level 3 in a range of sectors. They give learners the knowledge, understanding and skills they need to prepare for employment in a specific occupational area. The qualifications also provide career development opportunities for those already in work. The qualifications may be offered as full-time or part-time courses in schools or colleges. Training centres and employers may also offer these qualifications.

Sizes of Specialist qualifications

For all regulated qualifications, Pearson specify a total number of hours that it is estimated learners will require to complete and show achievement for the qualification – this is the Total Qualification Time (TQT). The TQT value indicates the size of a qualification.
Within the TQT, Pearson identifies the number of Guided Learning Hours (GLH) that we estimate a centre delivering the qualification might provide. Guided learning means activities, such as lessons, tutorials, online instruction, supervised study and giving feedback on performance, that directly involve tutors and assessors in teaching, supervising and invigilating learners. Guided learning includes the time required for learners to complete external assessment under examination or supervised conditions.
In addition to guided learning, other required learning directed by tutors or assessors will include private study, preparation for assessment and undertaking assessment when not under supervision, such as preparatory reading, revision and independent research.

As well as TQT and GLH, qualifications can also have a credit value – equal to one tenth of TQT, rounded to the nearest whole number.

TQT and credit values are assigned after consultation with users of the qualifications.

BTEC Specialist qualifications are generally available in the following sizes:

- Award – a qualification with a TQT value of 120 or less (equivalent to a range of 1–12 credits)
- Certificate – a qualification with a TQT value in the range of 121–369 (equivalent to a range of 13–36 credits)
- Diploma – a qualification with a TQT value of 370 or more (equivalent to 37 credits and above).

Pearson BTEC Level 3 Award

The Pearson BTEC Level 3 Award is an introduction to the skills, qualities and knowledge that may be required for employment in a particular vocational sector.

Pearson BTEC Level 3 Certificate

The Pearson BTEC Level 3 Certificate extends the work-related focus of the Pearson BTEC Level 3 Award and covers some of the knowledge and practical skills required for a particular vocational sector.

The Pearson BTEC Level 3 Certificate offers an engaging programme for those who are clear about the vocational area they want to learn more about. These learners may wish to extend their programme through the study of a related GCSE, a complementary NVQ or other related vocational or personal and social development qualification. These learning programmes can be developed to allow learners to study complementary qualifications without duplication of content.

For adult learners the Pearson BTEC Level 3 Certificate can extend their knowledge and understanding of work in a particular sector. It is a suitable qualification for those wishing to change career or move into a particular area of employment following a career break.

Key features of the Pearson BTEC Level 3 qualifications in Compartment Fire Behaviour Training

The Pearson BTEC Level 3 qualifications in Compartment Fire Behaviour Training have been developed to give learners the opportunity to:

- engage in learning that is relevant to them and which will provide opportunities to develop a range of skills and techniques, personal skills and attributes essential for successful performance in working life
- achieve a nationally-recognised Level 3 vocationally-related qualification
- progress to employment in a particular vocational sector
- progress to related general and/or vocational qualifications.

National Occupational Standards

Where relevant, Pearson BTEC Level 3 qualifications are designed to provide some of the underpinning knowledge and understanding for the National Occupational Standards (NOS), as well as developing practical skills in preparation for work and possible achievement of NVQs in due course. NOS form the basis of National Vocational Qualifications (NVQs). Pearson BTEC Level 3 qualifications do not purport to deliver occupational competence in the sector, which should be demonstrated in a work context.

Each unit in the specification identifies links to elements of the NOS in *Annexe C*.

The Pearson BTEC Level 3 Award and Certificate in Compartment Fire Behaviour Training relate to the following NOS:

Emergency Fire Services – Watch Management

Emergency Fire Services – Operations in the Community

Emergency Fire Services – Control Operations

Fire Investigation

Fire Safety

Rules of combination

The rules of combination specify the credits that need to be achieved, through the completion of particular units, for the qualification to be awarded. All accredited qualifications have rules of combination.

Rules of combination for Pearson BTEC Level 3 qualifications

When combining units for an Pearson BTEC Level 3 qualification in Compartment Fire Behaviour Training, it is the centre's responsibility to ensure that the following rules of combination are adhered to.

Pearson BTEC Level 3 Award in Compartment Fire Behaviour Training

The Total Qualification Time (TQT) for this qualification is 80.

The Guided Learning Hours (GLH) for this qualification are 60.

1 Qualification credit value: a minimum of 8 credits.
2 Minimum credit to be achieved at, or above, the level of the qualification: 8 credits.
3 All credits must be achieved from the units listed in this specification.

Pearson BTEC Level 3 Certificate in Compartment Fire Behaviour Training

The Total Qualification Time (TQT) for this qualification is 130.

The Guided Learning Hours (GLH) for this qualification are 100.

1 Qualification credit value: a minimum of 13 credits.
2 Minimum credit to be achieved at, or above, the level of the qualification: 13 credits.
3 All credits must be achieved from the units listed in this specification.

Pearson BTEC Level 3 Award and Certificate in Compartment Fire Behaviour Training

The Pearson BTEC Level 3 Award and Certificate in Compartment Fire Behaviour Training is an 8-credit and 60-guided learning hour (GLH) qualification that consists of two mandatory units.

Pearson BTEC Level 3 Award in Compartment Fire Behaviour Training			
Unit	**Mandatory units**	**Credit**	**Level**
1	Theory of Compartment Fire Behaviour	4	3
2	Application of Compartment Fire Behaviour Training	4	3

Pearson BTEC Level 3 Certificate in Compartment Fire Behaviour Training

The Pearson BTEC Level 3 Certificate in Compartment Fire Behaviour Training is a 13-credit and 100-guided learning hour (GLH) qualification that consists of three mandatory units.

Pearson BTEC Level 3 Certificate in Compartment Fire Behaviour Training			
Unit	**Mandatory units**	**Credit**	**Level**
1	Theory of Compartment Fire Behaviour	4	3
2	Application of Compartment Fire Behaviour Training	4	3
3	Application and Theory of Positive Pressure Ventilation Training	5	3

Assessment

All units within these qualifications are internally assessed. The qualifications are criterion referenced, based on the achievement of all the specified learning outcomes.

To achieve a 'pass' a learner must have successfully passed **all** the assessment criteria.

Guidance

The purpose of assessment is to ensure that effective learning has taken place to give learners the opportunity to:

- meet the standard determined by the assessment criteria and
- achieve the learning outcomes.

All the assignments created by centres should be reliable and fit for purpose, and built on the unit assessment criteria. Assessment tasks and activities should enable learners to produce valid, sufficient and reliable evidence that relates directly to the specified criteria. Centres should enable learners to produce evidence in a variety of different forms, including performance observation, presentations and posters, along with projects, or time-constrained assessments.

Centres are encouraged to emphasise the practical application of the assessment criteria, providing a realistic scenario for learners to adopt, and making maximum use of practical activities. The creation of assignments that are fit for purpose is vital to achievement and their importance cannot be over-emphasised.

The assessment criteria must be clearly indicated in the assignments briefs. This gives learners focus and helps with internal verification and standardisation processes. It will also help to ensure that learner feedback is specific to the assessment criteria.

When designing assignments briefs, centres are encouraged to identify common topics and themes. A central feature of vocational assessment is that it allows for assessment to be:

- current, ie to reflect the most recent developments and issues
- local, ie to reflect the employment context of the delivering centre
- flexible to reflect learner needs, ie at a time and in a way that matches the learner's requirements so that they can demonstrate achievement.

Qualification grade

Learners who achieve the minimum eligible credit value specified by the rules of combination will achieve the qualification at pass grade.

In Pearson BTEC Level 3 Specialist qualifications each unit has a credit value which specifies the number of credits that will be awarded to a learner who has achieved the learning outcomes of the unit. This has been based on:

- one credit for those learning outcomes achievable in 10 hours of learning time
- learning time being defined as the time taken by learners at the level of the unit, on average, to complete the learning outcomes of the unit to the standard determined by the assessment criteria
- the credit value of the unit remaining constant regardless of the method of assessment used or the qualification to which it contributes.

Quality assurance of centres

Pearson BTEC Level 3 qualifications provide a flexible structure for learners enabling programmes of varying credits and combining different levels. For the purposes of quality assurance, all individual qualifications and units are considered as a whole.

Centres delivering Pearson BTEC Level 3 qualifications must be committed to ensuring the quality of the units and qualifications they deliver, through effective standardisation of assessors and internal verification of assessor decisions. Centre quality assurance and assessment is monitored and guaranteed by Pearson.

The Pearson quality assurance processes will involve:

- centre approval for those centres not already recognised as a centre for BTEC qualifications
- approval for Pearson BTEC Level 3 qualifications and units
- **compulsory** Pearson-provided training and standardisation for internal verifiers and assessors leading to the accreditation of lead internal verifiers via the OSCA system
- quality review of centre verification practice
- centre risk assessment by Pearson of overarching processes and quality standards
- remedial training and/or assessment sampling for centres identified through standardisation or risk assessment activities as having inadequate quality, assessment or internal verification processes.

Approval

Centres are required to declare their commitment to ensuring the quality of the programme of learning and providing appropriate assessment opportunities for learners that lead to valid and accurate assessment outcomes. In addition, centres will commit to undertaking defined training and online standardisation activities.

Centres already holding BTEC approval are able to gain qualification approval online. New centres must complete a centre approval application.

Quality Assurance Guidance

Details of quality assurance for Pearson BTEC Level 3 qualifications are set out in centre guidance which is published on our website (qualifications.pearson.com).

Programme design and delivery

Mode of delivery

Pearson does not normally define the mode of delivery for Pearson BTEC Entry to Level 3 qualifications. Centres are free to offer the qualifications using any mode of delivery (such as full-time, part-time, evening only, distance learning) that meets their learners' needs. Whichever mode of delivery is used, centres must ensure that learners have appropriate access to the resources identified in the specification and to the subject specialists delivering the units. This is particularly important for learners studying for the qualification through open or distance learning.

Learners studying for the qualification on a part-time basis bring with them a wealth of experience that should be utilised to maximum effect by tutors and assessors. The use of assessment evidence drawn from learners' work environments should be encouraged. Those planning the programme should aim to enhance the vocational nature of the qualification by:

- liaising with employers to ensure a course relevant to learners' specific needs
- accessing and using non-confidential data and documents from learners' workplaces
- including sponsoring employers in the delivery of the programme and, where appropriate, in the assessment
- linking with company-based/workplace training programmes
- making full use of the variety of experience of work and life that learners bring to the programme.

Resources

Pearson BTEC Level 3 qualifications are designed to give learners an understanding of the skills needed for specific vocational sectors. Physical resources need to support the delivery of the programme and the assessment of the learning outcomes, and should therefore normally be of industry standard. Staff delivering programmes and conducting the assessments should be familiar with current practice and standards in the sector concerned. Centres will need to meet any specific resource requirements to gain approval from Pearson.

Where suggested resources are required these have been indicated in individual units in the *Essential resources* sections.

Delivery approach

It is important that centres develop an approach to teaching and learning that supports the vocational nature of Pearson BTEC Level 3 qualifications and the mode of delivery. Specifications give a balance of practical skill development and knowledge requirements, some of which can be theoretical in nature. Tutors and assessors need to ensure that appropriate links are made between theory and practical application and that the knowledge base is applied to the sector. This requires the development of relevant and up-to-date teaching materials that allow learners to apply their learning to actual events and activity within the sector. Maximum use should be made of learners' experience.

Additional and specialist learning

Additional and Specialist Learning (ASL) consists of accredited qualifications at the same level as, or one level above a 14-19 Diploma course of study, which have been approved under Section 96 of the Learning and Skills Act 2000. The ASL may include BTEC qualifications which are also available to learners not following a 14-19 Diploma course of study.

ASL qualifications are listed on the 14-19 Diploma Catalogue which is available on the Register of Regulated Qualifications (www.ofqual.gov.uk). The catalogue will expand over time as more qualifications are accredited and approved.

Centres undertaking, or preparing to undertake, ASL should refer regularly to the Pearson website for information regarding additions and the 14-19 Diploma Catalogue for the latest information.

Access and recruitment

Pearson's policy regarding access to its qualifications is that:

- they should be available to everyone who is capable of reaching the required standards
- they should be free from any barriers that restrict access and progression
- there should be equal opportunities for all wishing to access the qualifications.

Centres are required to recruit learners to BTEC qualifications with integrity. This will include ensuring that applicants have appropriate information and advice about the qualifications and that the qualification will meet their needs. Centres should take appropriate steps to assess each applicant's potential and make a professional judgement about their ability to successfully complete the programme of study and achieve the qualification. This assessment will need to take account of the support available to the learner within the centre during their programme of study and any specific support that might be necessary to allow the learner to access the assessment for the qualification. Centres should consult Pearson's policy on learners with particular requirements.

Centres will need to review the entry profile of qualifications and/or experience held by applicants, considering whether this profile shows an ability to progress to a higher level qualification.

Restrictions on learner entry

The Pearson BTEC Level 3 Award and Certificate in Compartment Fire Behaviour Training are accredited for learners aged 18 and above.

Access arrangements and special considerations

Pearson's policy on access arrangements and special considerations for BTEC and Pearson NVQ qualifications aims to enhance access to the qualifications for learners with disabilities and other difficulties (as defined by the 2010 Equality Act) without compromising the assessment of skills, knowledge, understanding or competence.

Further details are given in the policy document *Access Arrangements and Special Considerations for BTEC and Pearson Edexcel NVQ Qualifications*, which can be found on the Pearson website (qualifications.pearson.com). This policy replaces the previous Pearson policy (Assessment of Vocationally Related Qualifications: Regulations and Guidance Relating to Learners with Special Requirements, 2002) concerning learners with particular requirements.

Recognition of Prior Learning

Recognition of Prior Learning (RPL) is a method of assessment (leading to the award of credit) that considers whether a learner can demonstrate that they can meet the assessment requirements for a unit through knowledge, understanding or skills they already possess and so do not need to develop through a course of learning.

Pearson encourages centres to recognise learners' previous achievements and experiences whether at work, home and at leisure, as well as in the classroom. RPL provides a route for the recognition of the achievements resulting from continuous learning.

RPL enables recognition of achievement from a range of activities using any valid assessment methodology. Provided that the assessment requirements of a given unit or qualification have been met, the use of RPL is acceptable for accrediting a unit, units or a whole qualification. Evidence of learning must be sufficient, reliable and valid.

Unit format

Each unit has the following sections.

Unit title

This is the formal title of the unit that will appear on the learner's certificate.

Unit reference number

Each unit is assigned a unit reference number that appears with the unit title on the Register of Regulated Qualifications.

Level

All units and qualifications have a level assigned to them. The level assigned is informed by the level descriptors defined by Ofqual, the qualifications regulator.

Credit value

All units have a credit value. The minimum credit value that may be determined for a unit is one, and credits can only be awarded in whole numbers. Learners will be awarded credits for the successful completion of whole units.

Guided learning hours

Guided Learning Hours (GLH) is the number of hours that a centre delivering the qualification needs to provide. Guided learning means activities that directly or immediately involve tutors and assessors in teaching, supervising, and invigilating learners, for example lectures, tutorials, online instruction and supervised study.

Unit aim

The aim provides a clear summary of the purpose of the unit and is a succinct statement that summarises the learning outcomes of the unit.

Unit introduction

The unit introduction gives the reader an appreciation of the unit in the vocational setting of the qualification, as well as highlighting the focus of the unit. It gives the reader a snapshot of the unit and the key knowledge, skills and understanding gained while studying the unit. The unit introduction also highlights any links to the appropriate vocational sector by describing how the unit relates to that sector.

Learning outcomes

The learning outcomes of a unit set out what a learner is expected to know, understand or be able to do as the result of a process of learning.

Assessment criteria

The assessment criteria of a unit specify the standard a learner is expected to meet to demonstrate that a learning outcome, or set of learning outcomes, has been achieved. The learning outcomes and assessment criteria clearly articulate the learning achievement for which the credit will be awarded at the level assigned to the unit.

Unit content

The unit content identifies the breadth of knowledge, skills and understanding needed to design and deliver a programme of learning to achieve each of the learning outcomes. This is informed by the underpinning knowledge and understanding requirements of the related National Occupational Standards (NOS), where relevant. The content provides the range of subject material for the programme of learning and specifies the skills, knowledge and understanding required for achievement of the unit.

Each learning outcome is stated in full and then the key phrases or concepts related to that learning outcome are listed in italics followed by the subsequent range of related topics.

Relationship between content and assessment criteria

The learner should have the opportunity to cover all of the unit content.

It is not a requirement of the unit specification that all of the content is assessed. However, the indicative content will need to be covered in a programme of learning in order for learners to be able to meet the standard determined in the assessment criteria.

Content structure and terminology

The information below shows how the unit content is structured and gives the terminology used to explain the different components within the content.

- Learning outcome: this is shown in bold at the beginning of each section of content.
- Italicised sub-heading: it contains a key phrase or concept. This is content which must be covered in the delivery of the unit. Colons mark the end of an italicised sub-heading.

- Elements of content: the elements are in plain text and amplify the sub-heading. The elements must be covered in the delivery of the unit. Semi-colons mark the end of an element.
- Brackets contain amplification of content which must be covered in the delivery of the unit.
- 'eg' is a list of examples, used for indicative amplification of an element (that is, the content specified in this amplification could be covered or could be replaced by other, similar material).

Essential guidance for tutors

This section gives tutors additional guidance and amplification to aid understanding and a consistent level of delivery and assessment. It is divided into the following sections.

- *Delivery* – explains the content's relationship to the learning outcomes and offers guidance about possible approaches to delivery. This section is based on the more usual delivery modes but is not intended to rule out alternative approaches.
- *Assessment* – gives amplification about the nature and type of evidence that learners need to produce in order to achieve the unit. This section should be read in conjunction with the assessment criteria.
- *Suggested resources* – identifies any specialist resources needed to allow learners to generate the evidence required for each unit. The centre will be asked to ensure that any requirements are in place when it seeks approval from Edexcel to offer the qualification.
- *Indicative resource materials* – gives a list of learner resource material that benchmarks the level of study.

Units

Unit 1: Theory of Compartment Fire Behaviour

Unit reference number: H/502/6822

Level: 3

Credit value: 4

Guided learning hours: 30

Unit aim

The aim of this unit is to provide the knowledge and understanding a Compartment Fire Behaviour Training (CFBT) trainer needs to deliver theoretical training covering the fundamentals of fire behaviour and the development of a fire within a compartment. The unit will also give training staff knowledge of the appropriate techniques used to control and suppress a fire within a compartment.

Unit introduction

During the early 1980s, the Swedish fire and rescue services decided to develop techniques aimed at reducing the number of in the line of duty deaths (LODDs) of firefighters resulting from flashovers, backdraughts and fire-gas explosions on the fireground. The Swedish concept was based on a recognition and understanding of how fire develops and greater emphasis was placed on recognising specific warning signs that might lead to an ignition, ie flashover and backdraught. The UK fire service has taken this concept on and continues to develop it further.

The 'tactical solutions' and training implications associated with applying water-fog to control environmental conditions within a fire compartment are far more advanced than basic branch/nozzle techniques. Water-fog applications can be used effectively in both pre-flashover situations and post-flashover fires. CFBT training develops a greater awareness of fire growth and development, fire behaviour patterns, and the behaviour of flammable fire gas and smoke layers. This approach is being adopted worldwide in order to improve firefighter safety.

In this unit learners will explain the hazards and control measures associated with particular risks, and the relevant operational procedures to use to carry out training safely.

Learners will look at the various aspects of fire behaviour. Whilst they are dealing with fire development, they will also cover the safety protocols used when following firefighting procedures.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand the principles of combustion	1.1 explain the triangle of combustion 1.2 explain pyrolysis 1.3 explain complete, incomplete combustion and passives 1.4 describe flammable range 1.5 explain the chemistry of combustion 1.6 explain extinguishing media
2 Understand how fire develops and spreads within compartments	2.1 explain flashover 2.2 explain backdraught 2.3 explain fire gas explosion 2.4 explain the factors which affect the development and spread of a compartment fire
3 Understand methods used by firefighters to deal with and prevent fire development within a compartment	3.1 explain branch techniques 3.2 explain compartment entry procedures
4 Understand the safety procedures relating to training in fire development within compartment fire	4.1 explain need for continual dynamic risk assessment 4.2 describe relevant safety briefs 4.3 explain why emergency withdrawal and first aid procedures are needed during Compartment Fire Behaviour 4.4 explain health, safety and welfare procedures
5 Understand how to implement safety procedures	5.1 explain how health, safety and welfare procedures are implemented during compartment fire safety

Unit content

1 **Understand the principles of combustion**

Combustion: triangle of fire including interaction of heat, fuel and oxygen; propagation eg conduction, convection, radiation; process including pyrolysis; chemistry; types of combustion including complete, incomplete; products (carbons and un-burnt pyrolysis products); passives

Fire behaviour: combustible gases; flammable range eg lower explosive limit, upper explosive limit, ideal mixtures; ignition sources; fire gases; types of flame eg colours, pre-mixed, diffused; extinguishing media

2 **Understand how fire develops and spreads within compartments**

Compartment fire development: terminology eg air tract, under pressure, over pressure, neutral plane; stages of development (early, flashover, fully developed, decay); principle of thermal capacity and the concept of combustion inhibitors (passives); processes (smouldering fires, backdraught, fire-gas explosion)

Compartment fire spread: factors eg compartment construction, compartment size, fire loading, location of fire, changes in fire environment, ventilation; spread to adjacent compartments; effects of limited ventilation; effects of insufficient fuel

3 **Understand methods used by firefighters to deal with and prevent fire development within a compartment**

Extinguishing theory and methods: direct cooling; indirect cooling; gas cooling; with water (effects of steam)

Compartment entry procedures: door procedures (signs and symptoms); DRA

4 **Understand the safety procedures relating to training in fire development within compartment fire**

Risk assessment: need for continual dynamic risk assessments

Contingency plans: emergency plans (for withdrawal, extremes of weather, fatigue, physiological and psychological injury); provision of emergency first aid

5 **Understand how to implement safety procedures**

Safety procedures: checking the maintenance of the compartment; PPE; trainer/learner ratio; pre-exercise safety brief; health monitoring and welfare of trainers and learners; branch techniques; movement within environment; environmental temperature monitoring

Essential guidance for tutors

Delivery

This unit can be delivered using a combination of discussion-led and practical sessions.

This is a theory-based unit and, therefore, the main delivery methods will be formal lectures, presentations and guided group discussions. Syndicate work will also take place. These delivery methods may be reinforced by using video presentations and computer simulations.

It is anticipated that learners will be employed in the fire and rescue services sector with a working knowledge of firefighting operations within the community. Learners should have the opportunity to use their existing knowledge.

There are also a variety of experiments which can be carried out during delivery of this unit to reinforce what is covered in the discussions.

Examples of experiments which could aid delivery of this unit are:

- flask experiment with wood chips and polystyrene
- candle and flame experiment
- flammable range Bang Box experiment
- gas aquarium experiment
- fire growth demonstration/container session
- window container session, describing the principles of backdraught prevention techniques.

Experiments should be delivered in a practical setting and could involve demonstrations in the classroom and the open air. Learners should be given the opportunity to be involved in the running of these experiments, allowing them to reinforce the knowledge and understanding needed to manage experiments safely.

An example of an experiment which proves that smoke burns is the decomposition of wooden chips in a glass container when heated by a Bunsen burner flame. Smoke is emitted which can then be ignited outside the glass container.

Learners will be expected to work in syndicate pairs or groups required to meet the safety requirements, and to demonstrate knowledge, understanding and practical application of the unit content. Additionally, learners must undertake individual tasks within these syndicate pairs or groups to develop their ideas and personal skills.

Assessment

This unit includes a balance of research and theory to enable learners to apply the knowledge gained to a series of linked learning activities.

Assessment can take the form of written assignments, reports, presentations or professional discussions with the assessor and may be recorded on either observation sheets or using audio recording equipment. Practical exercises and experiments could be recorded on video.

Assessment should be based on either suitable case studies or on a series of short scenarios. Case studies must be developed in sufficient detail to reflect the complexities of a real-life situation.

Learners could produce a project, supported with answers to questions based on the case study, or undertake a professional discussion with the assessor.

Evidence should show depth and breadth of understanding, coherence, analysis, evaluation, an independent approach, intuition and perception, and an ability to communicate clearly and concisely.

Learners must explain the different types of combustion, the chemistry of combustion and its processes and products. They could produce diagrammatic illustrations and perform practical experiments, such as flask experiment(s) with wood chips and polystyrene.

Learners must also explain extinguishing media including water, and the principles of latent heat vapourisation.

They must explain the principles of compartment fire behaviour. Learners could explain the process using a multimedia presentation to the syndicate groups. This could involve the use of flammable range Bang Box and gas aquarium experiment(s).

Learners must describe the key stages and processes in the development of a compartment fire. For this, they could illustrate and describe the stages and processes in a simulated teaching environment, taking questions from other learners acting as trainees.

Learners must also explain the factors that affect the development and spread of a compartment fire. This could be through a practical demonstration in a real fire scenario using a demonstration container session, window container or an appropriate training facility. This will allow learners to describe the factors that affect the development and spread of a compartment fire and to explain the principles of backdraught prevention techniques.

Learners must explain the methods used to extinguish a compartment fire. Learners could achieve this using multimedia material and a 'dummy' branch in a simulated practical demonstration.

Learners must explain the need for continual dynamic risk assessment and they could produce relevant lesson plans to demonstrate this.

Learners need to produce relevant contingency plans for use during compartment fire behaviour training. This could be carried out by designing and delivering specific safety briefs.

Lastly, learners must explain how health, safety and welfare procedures are implemented. They could practise delivering safety briefings for specific scenarios. Learners could discuss and prepare emergency procedures for a variety of situations. They would be expected to explain how to implement these procedures.

Suggested resources

Learners must be supplied with suitable reference materials, such as handouts, case studies, lecture notes and audio-visual aids. Access to IT and photocopying facilities is essential for syndicate working. Suitable learning environments are also essential. Multimedia interactive systems could be made available to enable learners to complete this unit, for example digital projection units and/or whiteboards.

Fire behaviour experiments will require the following items:

- Bunsen burners
- flasks
- wood chips/polystyrene pieces
- candles, gauze, aluminium corners
- flammability range demonstration unit (Bang Box)
- gas aquarium
- demonstration container or similar training facility
- window container or similar training facility.

Indicative resource materials

There are numerous books, journals and websites available for further reading.

Unit 2: Application of Compartment Fire Behaviour Training

Unit reference number: L/502/6829

Level: 3

Credit value: 4

Guided learning hours: 30

Unit aim

The aim of this unit is to enable learners to apply their knowledge and understanding of compartment fire behaviour to practical firefighting situations, so that they are familiar with them when teaching others. The unit includes application of the procedures used to create a safe working environment for firefighters during the various stages of fire development that can be encountered on the incident ground, demonstrating the ability to use ventilation extinguishing and cooling techniques and entry techniques effectively and implementing emergency procedures as required. Learners will demonstrate the ability to use a carbonaceous Compartment Fire Behaviour Training (CFBT) facility safely for its designed purpose, complying with the manufacturer's user guidance and current good practice techniques.

Unit introduction

During the early 1980s, the Swedish fire and rescue services developed techniques to reduce the number of in the line of duty deaths (LODDs) of firefighters resulting from flashover, backdraughts and fire-gas explosions on the fireground. The Swedish concept was based on a recognition and understanding of how fire develops and greater emphasis was placed on recognising specific warning signs that might lead to a fire-gas ignition, ie flashover and backdraught. The UK fire service has taken this concept on and continues to develop it further.

The 'tactical solutions' and training implications associated with applying water-fog to control environmental conditions within a fire room compartment are far more advanced than those relating to the use of basic branch/nozzle techniques. CFBT develops a greater awareness of fire growth and development, fire behaviour patterns, and the behaviour of flammable fire-gas and smoke layers. This approach is being adopted worldwide in order to improve firefighter safety.

These procedures are used to create a safe working environment for firefighters during the various stages of fire development that can be encountered on the incident ground.

Learners will look at the various aspects of implementing practical procedures to deal with fire behaviour and development, demonstrating the ability to effectively use tactical ventilation (not positive pressure ventilation as this is covered in *Unit 3: Application and Theory of Positive Pressure Ventilation*), extinguishing and cooling

techniques and entry techniques effectively and, when required, how to instigate emergency procedures.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to respond to the conditions within compartments	1.1 identify hazards and risks of the neutral zone horizontal positions 1.2 apply dynamic risk assessments, based on the changing conditions of the fire environment 1.3 apply ventilation techniques
2 Be able to demonstrate firefighting techniques prior to and after compartment entry	2.1 apply methods of gaining entry to compartments 2.2 apply branch techniques in fire compartments 2.3 apply branch techniques in compartment adjacent to the fire compartments 2.4 apply branch techniques to prevent further pyrolysis
3 Be able to demonstrate procedures for operating a carbonaceous Compartment Fire Behaviour Training facility	3.1 inform users of the carbonaceous systems in use, including their physical properties 3.2 apply loading protocols of the carbonaceous system in use 3.3 apply health, safety and welfare monitoring procedures required during delivery of carbonaceous Compartment Fire Behaviour 3.4 apply risk assessment for a carbonaceous Compartment Fire Behaviour Training facility 3.5 apply emergency safety procedures
4 Be able to conduct a Compartment Fire Behaviour Training session	4.1 deliver relevant safety brief prior to session 4.2 deliver appropriate session brief prior to session 4.3 set safe and controlled conditions within the compartment 4.4 carry out structured debrief and close session

Unit content

1 **Be able to respond to the conditions within compartments**

Conditions within a compartment: neutral zone/plane combustible gas layers horizontal positions; smoke colours eg black, grey; smoke temperatures; flame colours; position of flame fronts exiting the fire compartment; speed of the smoke layer movement

Ventilation techniques: steam removal, vent operations, air management

Risk assessment: appropriate Generic and Dynamic Risk Assessments (GRA/DRA)

2 **Be able to demonstrate firefighting techniques prior to and after compartment entry**

Entry techniques: locating the fire; reading the stage of fire development; securing the area around the fire compartment before entry; cooling techniques from adjacent compartments before entry; entry via a door; entry via a window

Extinguishing techniques: direct and indirect; over-pressure and under-pressure

Branch techniques: cooling techniques in fire compartments; use of water to prevent further pyrolysis

3 **Be able to demonstrate procedures for operating a carbonaceous Compartment Fire Behaviour Training facility**

Carbonaceous systems: carbonaceous fuels eg wood, fibrous materials; physical properties (flammability, toxicity, environmental issues); protocols for fuel load (compliance with GRA)

Health, safety and welfare monitoring procedures: eg for heat stress, for heat syncope, hydration levels, personal protective equipment (PPE), firefighting equipment, communication systems, maintenance of the facility's safety system

Risk assessments: application of knowledge and understanding relevant to Generic and Dynamic Risk Assessments (GRA/DRA)

4 **Be able to conduct a Compartment Fire Behaviour Training session**

CFBT session: safety brief, session brief, set safe and controlled conditions, debrief

Essential guidance for tutors

Delivery

This unit is based on a balance of research, theory and practical exercises. Learners must have a sound theoretical knowledge of the fundamentals of compartment fire behaviour before attempting this unit. The knowledge gained from studying case studies and real scenarios should be applied within a purpose-built carbonaceous CFBT simulator. Creating the required, safe simulated environments will help learners to understand how these operational techniques and procedures can be applied.

Practical demonstrations could cover the use of current good practice equipment: such as the aquarium, the Bang Box, Bunsen burners, glass containers with wooden chips inside, the single compartment chipboard box and the doll's house (a multi-compartment chipboard box).

Learners should use a range of methods to find out about policies, procedures and good practice related to dealing with compartment fire to help with their personal development for example textbooks, the brigade intranet, the internet, technical journals and statutory instruments. They should also be encouraged to work individually, in syndicate pairs and in groups to enable them to think through and compare ideas, to share knowledge and understanding, to network and to help with their personal development.

Assessment

Assessment for this unit could take the form of debriefing presentations, videoed practical exercises and professional discussions with the assessor, which could either be recorded on observation sheets or using audio-recording equipment. Evidence should show depth and breadth of understanding, analysis and evaluation, an independent approach, intuition and perception, and an ability to apply the appropriate learning and development techniques.

Learners could be given one complete scenario (or several short scenarios) on which their assessment is based. The scenario must be developed in sufficient detail to reflect the complexities of a real-life situation. Learners could produce a project, supported with answers to questions based on the scenario(s), or conduct a professional discussion with an assessor.

Much of this unit is practical and, therefore, practical activities must be carried out, where appropriate. Simulated environments should be used. Evidence could be compiled through the use of observation sheets or video-recording equipment.

Learners should also apply dynamic risk assessments within the changing fire environments.

Learners need to apply their knowledge and understanding of CFBT extinguishing and cooling techniques in a practical setting, within the fire compartment and adjacent compartments. This can be achieved through facilitating CFBT simulated scenarios. Demonstrations could include:

- original ignition stage to flashover/backdraught stage
- direct and indirect extinguishing
- over/under pressure extinguishing techniques

- cooling of the smoke in the fire room compartment from adjacent compartments.

Learners need to identify the stage of a fire on arrival, apply appropriate entry techniques and use current good practice tactics to prevent further pyrolysis. Additionally, learners will need to show how they would implement the range of emergency procedures relevant to the carbonaceous CFBT facility. This should be carried out during the practical simulated scenarios undertaken in the carbonaceous CFBT facility.

Learners must deliver session and safety briefs, set and control the conditions and deliver a debrief. They must also be able to use the appropriate procedures for operating the carbonaceous CFBT facility. Learners should describe the physical properties to users of the simulator and apply the loading protocols of the carbonaceous fuels used by the system. They should select various materials and apply the safety requirements related to the physical properties created during the decomposition of these materials.

Learners should also implement the health monitoring procedures required for CFBT trainers as identified in the Generic Risk Assessment (GRA). This could be assessed by direct observation of performance and supported by the use of questions and answers to confirm learner knowledge and understanding of the procedures.

Learners should be able to implement Generic and Dynamic Risk Assessments (GRA/DRA), for example overseeing the loading protocols in compliance with the GRA. Post-scenario, learners could produce evaluation reports on the effectiveness of the Generic and Dynamic Risk Assessments. They could then discuss them with the tutor and the carbonaceous CFBT facility providers, ensuring compliance and an understanding of *HSG 65 Successful Health and Safety Management* (HSE).

Suggested resources

Library resources, including books and emergency fire service videos, CD ROMs, DVDs and interactive systems, should be available to enable learners to complete this unit. Suitable classrooms, audio-visual aids, computers, lecture packs, handouts, scale demonstration models, such as the aquarium, the Bang Box, Bunsen burner and glass container with wooden chips, the single compartment chipboard box, the doll's house (a multi-compartment chipboard box), should also be available. A single fire room compartment carbonaceous CFBT simulator is essential.

Indicative resource materials

There are numerous books, journals and websites available for further reading.

Unit 3: Application and Theory of Positive Pressure Ventilation Training

Unit reference number: R/502/8341

Level: 3

Credit value: 5

Guided learning hours: 40

Unit aim

The aim of this unit is to enable learners to develop the knowledge, understanding and skills needed to underpin firefighting procedures to support a safer working environment for firefighters during the various stages of fire development which may be encountered on the incident ground.

The unit involves using positive pressure ventilation techniques and entry and air control techniques and implementing emergency procedures as required. Learners will use a positive pressure ventilation training facility, complying with the manufacturer's user guidance and current good practice techniques.

Unit introduction

During the early 1980s, some fire departments in the United States of America (USA) developed positive pressure ventilation (PPV) techniques aimed at reducing the number of in the line of duty deaths (LODDs) of firefighters resulting from flashover and backdraughts. The USA concept was based on recognising and understanding fire development and when to apply PPV fans as an additional and integral part of implementing 'tactical ventilation'. The benefit of applying PPV fans correctly being the removal of flames and smoke which creates a safer environment for firefighters to perform their role in. This specialised approach is being adopted by fire and rescue services throughout the UK.

Learners will demonstrate the ability to use PPV techniques and entry and air control techniques effectively and to implement emergency procedures if required.

Learners will also demonstrate the ability to use a PPV training facility and to follow the manufacturer's user guidance and current good practice techniques.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to demonstrate Positive Pressure Ventilation (PPV) techniques	1.1 explain operational PPV techniques in specific locations 1.2 apply sequential ventilation techniques in compartments 1.3 apply inlet, outlet and air flow management techniques
2 Be able to demonstrate entry and air control techniques and procedures in compartments	2.1 identify signs and symptoms associated with flashover and backdraught 2.2 identify hazards and risks associated with flashover and backdraught 2.3 apply entry and air control techniques in compartments 2.4 apply tactics to respond to flashover and backdraught 2.5 implement emergency safety procedures
3 Be able to apply operating procedures for Positive Pressure Ventilation (PPV) training facility	3.1 Explain the need for continual dynamic risk assessment 3.2 apply the generic risk assessment for the PPV training facility 3.3 apply health, safety and welfare monitoring procedures required during delivery of PPV training 3.4 apply the dynamic risk assessment used in the delivery of PPV training
4 Be able to conduct positive pressure ventilation training session	4.1 deliver relevant safety brief prior to session 4.2 deliver session brief prior to session 4.3 Set safe and controlled conditions within the compartment 4.4 carry out structured debrief and close session

Unit content

1 **Be able to demonstrate Positive Pressure Ventilation (PPV) techniques**

Positive Pressure Ventilation (PPV) techniques: identifying the appropriate outlet and inlet locations and sizes; appropriate positioning of positive pressure ventilation (PPV) fans; method of fire attack to extinguish fire within the fire compartment; air flow management; sequential ventilation of compartments adjacent to the fire compartment; specific building locations eg high-rise, basements and enclosed rooms

Hazards and risk identification and tactical responses: escaping hot combustible gases; provision of a covering water spray jet at the outlet (exit port); preference of open windows rather than breaking to create outlet (exit port); broken glass and debris; using aerial appliances to create high level outlet (exit port); ensuring that water spray jets are not directed into the created outlet (exit port)

2 **Be able to demonstrate entry and air control techniques and procedures in compartments**

Entry and air control techniques: identification of location of the fire compartment; identification of wind direction and strength; identification of access for air flows created by positive pressure ventilation (PPV) fans; current good practice for radio communications during operational use of positive pressure ventilation (PPV) fans; performance of appropriate sequential ventilation around fire compartment

Hazards and risks: creating an appropriate size for the outlet (exit port); possibility of locally intensifying the fire; increasing potential for creating a flashover or backdraught; and of creating a fire-gas explosion

Emergency procedures: application of knowledge and understanding of current good practice emergency procedures

3 **Be able to apply operating procedures for Positive Pressure Ventilation (PPV) training facility**

Carbonaceous systems: carbonaceous fuels eg wood, fibrous materials; physical properties (flammability, toxicity, environmental issues); protocols for fuel load (compliance with GRA)

Health, safety and welfare monitoring procedures: eg heat stress, heat syncope, hydration levels, personal protective equipment (PPE), firefighting equipment, communication systems, maintenance protocols for the simulator

Risk assessments: application of knowledge and understanding of safety systems relevant to GRA/DRA

4 **Be able to conduct positive pressure ventilation training session**

PPV training session: safety brief, session brief, set safe and controlled conditions, debrief

Essential guidance for tutors

Delivery

Before they can safely attempt this unit, learners must:

- have a thorough knowledge of the fundamental principles of compartment fire behaviour
- be able to demonstrate good practice tactical ventilation procedures.

Learners should put theory into practice in the real work environment. This should involve using case studies in the classroom and practical scenarios in a current good practice, purpose-built carbonaceous positive pressure ventilation (PPV) training facility. Creating the required, safe simulated environments will help learners to understand how these operational techniques and procedures are applied. Tutors should use a range of approaches in delivering this unit. For example lectures, handouts, audio-visual aids, role play and practical demonstration, using the following current good practice equipment: PPV fans, breaking in tools and personal protective equipment (PPE).

Learners should read widely about policies, procedures and good practice related to PPV training to help with their personal development. Textbooks, the brigade intranet, the internet, technical journals and statutory instruments are all useful resources. Learners should also be encouraged to work in syndicate pairs and groups to think through and compare ideas, share knowledge and understanding, network and help with their personal development.

Learners should be able to apply their knowledge and understanding of current good practice when using the PPV training facility.

Assessment

Assessment might take the form of presentations, practical exercises and video or audio evidence. Learners could be given scenarios on which their assessment is based. Scenarios must go into a level of detail sufficient to reflect the complexities of a real-life situation.

Much of this unit is practical, therefore evidence must be gathered, where appropriate, in a simulated environment.

Evidence should show depth and breadth of understanding, coherence, analysis, evaluation, independence, intuition and perception, and an ability to apply appropriate learning and development techniques.

Learners must apply appropriate sequential ventilation techniques in compartments adjacent to the fire compartment. They must also apply PPV techniques in specific structures and appropriate inlet/outlet and air flow management techniques. All of this could be assessed by direct observation of learners applying techniques during a simulated exercise(s). Tutors could also conduct a question and answer session with learners to confirm their application of knowledge and their understanding of appropriate techniques for a range of situations.

Learners need to apply appropriate entry and air control techniques to the fire compartment, identify the signs and symptoms of backdraught and flashover and the associated hazards and risks. This could be assessed through a practical session, followed by a one-to-one discussion with the tutor.

Learners will need to apply tactics to meet the needs of the incident and implement emergency procedures as appropriate. This could be assessed by direct observation of learners and supported by questions and answers to confirm their application of knowledge and understanding relating to the scope of applications covered by the GRA.

Learners must operate the PPV training facility using the appropriate procedures. Learners should inform users of the physical properties of, and apply the appropriate loading protocols to, the carbonaceous fuels used by the system. They should select the various materials and apply the safety requirements related to the physical properties created during the decomposition of these materials.

Learners should also implement the health, safety and welfare monitoring procedures required for PPV trainers as identified in the GRA. This could be assessed through direct observation of performance and supported by the use of questions and answers to confirm learners' application, knowledge and understanding of the procedures.

Learners must deliver session and safety briefs, set and control the conditions and deliver a debrief. They must also be able to apply Generic and Dynamic Risk Assessments (GRA/DRA), for example, overseeing the loading protocols in compliance with the GRA. Post-scenario, learners could provide evaluation reports on the effectiveness of the GRA/DRA and discuss them with tutors and the PPV training facility providers, ensuring compliance and an understanding of *HSG 65 Successful Health and Safety Management* (HSE).

Suggested resources

Sufficient library resources, including books and emergency fire service videos, CD ROMs, DVDs and interactive systems, should be available to enable learners to achieve this unit. Suitable classrooms, audio-visual aids, computers, lecture packs, handouts, health monitoring forms, PPV training facility maintenance forms, case studies from real PPV incidents, scale demonstration models such as the aquarium, the Bang Box, the single compartment chipboard box, a doll's house (a multi-compartment chipboard box) should also be available.

A single fire compartment PPV training facility is essential. Current good practice firefighting equipment, PPV fans, personal protective equipment (PPE) and communication systems used by the PPV trainer's own fire and rescue service are essential.

Indicative resource materials

There are numerous books, journals and websites available for further reading.

Further information and useful publications

To get in touch with us visit our 'Contact us' pages:

- Edexcel, BTEC and Pearson Work Based Learning contact details: qualifications.pearson.com/en/support/contact-us.html
- books, software and online resources for UK schools and colleges: www.pearsonschoolsandfecolleges.co.uk

Key publications:

- *Adjustments for candidates with disabilities and learning difficulties, Access and Arrangements and Reasonable Adjustments, General and Vocational qualifications* (Joint Council for Qualifications (JCQ))
- *Supplementary guidance for reasonable adjustments and special consideration in vocational internally assessed units* (Pearson)
- *General and Vocational qualifications, Suspected Malpractice in Examination and Assessments: Policies and Procedures* (JCQ)
- *Equality Policy* (Pearson)
- *Recognition of Prior Learning Policy and Process* (Pearson)
- *UK Information Manual* (Pearson)
- *BTEC UK Quality Assurance Centre Handbook*

All of these publications are available on our website.

Publications on the quality assurance of BTEC qualifications are also available on our website.

Our publications catalogue lists all the material available to support our qualifications. To access the catalogue and order publications, please visit our website.

Additional resources

If you need further learning and teaching materials to support planning and delivery for your learners, there is a wide range of BTEC resources available.

Any publisher can seek endorsement for their resources and, if they are successful, we will list their BTEC resources on our website.

How to obtain National Occupational Standards

Skills for Justice
Centre Court
Atlas Way
Sheffield
S4 7QQ

Telephone: 0114 261 1499

Email: info@skillsforjustice.com

Professional development and training

Pearson supports UK and international customers with training related to BTEC qualifications. This support is available through a choice of training options offered on our website.

The support we offer focuses on a range of issues, such as:

- planning for the delivery of a new programme
- planning for assessment and grading
- developing effective assignments
- building your team and teamwork skills
- developing learner-centred learning and teaching approaches
- building in effective and efficient quality assurance systems.

The national programme of training we offer is on our website. You can request centre-based training through the website or you can contact one of our advisers in the Training from Pearson UK team via Customer Services to discuss your training needs.

BTEC training and support for the lifetime of the qualifications

Training and networks: our training programme ranges from free introductory events through sector-specific opportunities to detailed training on all aspects of delivery, assignments and assessment. We also host some regional network events to allow you to share your experiences, ideas and best practice with other BTEC colleagues in your region.

Regional support: our team of Curriculum Development Managers and Curriculum Support Consultants, based around the country, are responsible for providing advice and support in centres. They can help you with planning and curriculum developments.

To get in touch with our dedicated support teams please visit our website.

Your Pearson support team

Whether you want to talk to a sector specialist, browse online or submit your query for an individual response, there's someone in our Pearson support team to help you whenever – and however – you need:

- Subject Advisors: find out more about our subject advisor team – immediate, reliable support from a fellow subject expert
- Ask the Expert: submit your question online to our Ask the Expert online service and we will make sure your query is handled by a subject specialist.

Please visit our website at qualifications.pearson.com/en/support/contact-us.html

Annexe A

The Pearson/BTEC qualification framework for the Fire and Rescue Service sector

Progression opportunities within the framework.

Level	General qualifications	BTEC full vocationally-related qualifications	BTEC specialist courses	NVQ/occupational
8				
7				
6				
5		Higher Nationals in Public Services		
4				Pearson Edexcel Level 4 NVQ in Operational Management

Level	General qualifications	BTEC full vocationally-related qualifications	BTEC specialist courses	NVQ/occupational
3		Pearson BTEC Level 3 Certificate, Subsidiary Diploma, Diploma and Extended Diploma in Public Services	Pearson BTEC Level 3 Award in Fitness Testing and Training for the Uniformed Public Services Pearson BTEC Level 3 Award in Understanding Discipline in the Uniformed Public Services Pearson BTEC Level 3 Certificate in Public Sector Practice Pearson BTEC Level 3 Certificate in Public Sector Practice (Uniformed) Pearson BTEC Level 3 Diploma in Public Sector Practice Pearson BTEC Level 3 Diploma in Public Sector Practice (Uniformed)	Pearson Edexcel Level 3 Diploma in Policing Pearson Edexcel Level 3 NVQ in Police Supervisory Management
2		Pearson BTEC Level 2 Certificate, Extended Certificate and Diploma in Public Services	Pearson BTEC Level 2 Award in Improving Health and Fitness for Entry to the Uniformed Public Services Pearson BTEC Level 2 Award in Public Sector Practice Pearson BTEC Level 2 Extended Certificate in Public Sector Practice	Pearson Edexcel Level 2 NVQ Diploma in Public Services – Operational Delivery (Uniformed)

Level	General qualifications	BTEC full vocationally-related qualifications	BTEC specialist courses	NVQ/occupational
1		Level 1 Diploma in Public Services Level 1 Certificate in Public Services Level 1 Award in Public Service		
Entry		Entry Level 3 Award in Public Services		

Annexe B

Wider curriculum mapping

Study of Pearson BTEC Level 3 qualifications gives learners opportunities to develop an understanding of spiritual, moral, ethical, social and cultural issues as well as an awareness of citizenship, environmental issues, European developments, health and safety considerations and equal opportunities issues.

Spiritual, moral, ethical, social and cultural issues

Throughout the delivery of these qualifications learners will have the opportunity to actively participate in different kinds of decision making. They will have to consider fair and unfair situations and explore how to resolve conflict. Working in small groups they will learn how to respect and value others' beliefs, backgrounds and traditions.

Citizenship

Learners undertaking these qualifications will have the opportunity to develop their understanding of citizenship issues.

Environmental issues

Developing a responsible attitude towards the care of the environment is an integral part of these qualifications. Learners are encouraged to minimise waste and discuss controversial issues.

European developments

Much of the content of the qualification applies throughout Europe, even though the delivery is in a UK context.

Health and safety considerations

Health and safety is embedded within many of the units in these qualifications. Learners will consider their own health and safety at work, how to identify risks and hazards and how to minimise those risks.

Equal opportunities issues

There will be opportunities throughout these qualifications to explore different kinds of rights and how these affect both individuals and communities, for example learners will consider their rights at work and the rights of employers and how these rights affect the work community.

Annexe C

National Occupational Standards/mapping with NVQs and NOS

The grid below maps the knowledge covered in the Pearson BTEC Level 3 Specialist qualifications in Compartment Fire Behaviour Training against the underpinning knowledge of the Pearson Edexcel Level 3 NVQ Diploma in Emergency Fire Services Operations in the Community or National Occupational Standards in Emergency Fire Services Operations in the Community, Emergency Fire Services Watch Management, Emergency Fire Services Control Operations, Fire Investigation and Fire Safety.

KEY

\# indicates partial coverage of the NVQ unit

a blank space indicates no coverage of the underpinning knowledge

Units	**1**	**2**	**3**
Pearson Edexcel Level 3 NVQ Diploma in Emergency Fire Services Operations in the Community	#	#	#
NOS in Emergency Fire Services Operations in the Community	#	#	#
NOS in Emergency Fire Services Watch Management	#	#	#
NOS in Emergency Fire Services Control Operations	#	#	#
NOS in Fire Investigation	#	#	#
NOS in Fire Safety	#	#	#

Annexe D

Mapping to Level 2 Functional Skills

Level 2	Unit number		
English – Speaking, Listening and Communication	**1**	**2**	**3**
Make a range of contributions to discussions in a range of contexts, including those that are unfamiliar, and make effective presentations	✓	✓	✓
English – Reading			
Select, read, understand and compare texts and use them to gather information, ideas, arguments and opinions	✓	✓	✓
English – Writing			
Write a range of texts, including extended written documents, communicating information, ideas and opinions, effectively and persuasively	✓	✓	✓

Annexe E

Glossary of accreditation terminology

The following information about this qualification can also be found on the Pearson website – see: 'Accreditation Information'.

Accreditation start/end date	The first/last dates that Pearson can register learners for a qualification.
Certification end date	The last date on which a certificate may be issued by Pearson.
Credit value	All units have a credit value. The minimum credit value that may be determined for a unit is one, and credits can only be awarded in whole numbers. Learners will be awarded credits for the successful completion of whole units.
Guided Learning Hours (GLH)	Guided learning hours are defined as all the times when a tutor, trainer or facilitator is present to give specific guidance towards the learning aim being studied on a programme. This definition includes lectures, tutorials and supervised study in, for example, open learning centres and learning workshops. It also includes time spent by staff assessing learners' achievements. It does not include time spent by staff in day-to-day marking of assignments or homework where the learner is not present.
Learning Aims Database	Link to the Learning Aims Database, which features detailed funding information by specific learning aim reference.
Learning Aim Reference	Unique reference number given to the qualification by the funding authorities on accreditation.
Level	The level at which the qualification is positioned on the Regulated Qualifications Framework
Qualifications Number (QN)	Unique reference number given to the qualification by the regulatory authorities on accreditation.
Register of Regulated Qualifications	Link to the entry on the Register of Regulated Qualifications for a particular qualification. This database features detailed accreditation information for the particular qualification.
Section 96	Section 96 is a section of the Learning and Skills Act 2000. This shows for which age ranges the qualification is publicly funded for under-19 learners.
Section 97	Section 97 is a section of the Learning and Skills Act 2000. This shows whether the qualification is publicly funded for learners aged 19 and over.
Title	The accredited title of the qualification.

Annexe F

BTEC Specialist and Professional qualifications

BTEC qualifications on the NQF	Level	BTEC Specialist and Professional Qualifications	BTEC qualification suites
BTEC Level 7 Advanced Professional Qualifications BTEC Advanced Professional Award, Certificate and Diploma	7	**BTEC Level 7 Professional Qualifications** BTEC Level 7 Award, Certificate, Extended Certificate and Diploma	
BTEC Level 6 Professional Qualifications BTEC Professional Award, Certificate and Diploma	6	**BTEC Level 6 Professional Qualifications** BTEC Level 6 Award, Certificate, Extended Certificate and Diploma	
BTEC Level 5 Professional Qualifications BTEC Professional Award, Certificate and Diploma	5	**BTEC Level 5 Professional Qualifications** BTEC Level 5 Award, Certificate, Extended Certificate and Diploma	**BTEC Level 5 Higher Nationals** BTEC Level 5 HND Diploma
BTEC Level 4 Professional Qualifications BTEC Professional Award, Certificate and Diploma	4	**BTEC Level 4 Professional Qualifications** BTEC Level 4 Award, Certificate, Extended Certificate and Diploma	**BTEC Level 4 Higher Nationals** BTEC Level 4 HNC Diploma
BTEC Level 3 Qualifications BTEC Award, Certificate, Extended Certificate and Diploma	3	**BTEC Level 3 Specialist Qualifications** BTEC Level 3 Award, Certificate, Extended Certificate and Diploma	**BTEC Level 3 Nationals** BTEC Level 3 Certificate, Subsidiary Diploma, Diploma and Extended Diploma

BTEC qualifications on the NQF	Level	BTEC Specialist and Professional Qualifications	BTEC qualification suites
BTEC Level 2 Qualifications BTEC Award, Certificate, Extended Certificate and Diploma	2	**BTEC Level 2 Specialist Qualifications** BTEC Level 2 Award, Certificate, Extended Certificate and Diploma	**BTEC Level 2 Firsts** BTEC Level 2 Certificate, Extended Certificate and Diploma
BTEC Level 1 Qualifications BTEC Award, Certificate, Extended Certificate and Diploma	1	**BTEC Level 1 Specialist Qualifications** BTEC Level 1 Award, Certificate, Extended Certificate and Diploma	**BTEC Level 1 Qualifications** BTEC Level 1 Award, Certificate and Diploma (vocational component of Foundation Learning)
	E	**BTEC Entry Level Specialist Qualifications** BTEC Entry Level Award, Certificate, Extended Certificate and Diploma	**BTEC Entry Level Qualifications (E3)** BTEC Entry Level 3 Award, Certificate and Diploma (vocational component of Foundation Learning)

NQF = National Qualifications Framework

For most qualifications on the **NQF**, the accreditation end date is normally 31 August 2010 or 31 December 2010.

Qualification sizes	
Award	1-12 credits
Certificate	13-36 credits
Diploma	37+ credits

September 2017

For information about Edexcel, BTEC or LCCI qualifications visit qualifications.pearson.com

Pearson Education Limited. Registered in England and Wales No. 872828
Registered Office: 80 Strand, London WC2R 0RL.
VAT Reg No GB 278 537121