



THE INSTITUTION OF FIRE ENGINEERS  
FOUNDED 1918 • INCORPORATED 1924

# **IFE Level 3 Certificate in Fire Safety**

## **Qualification Specification**

**Qualification Number: 603/6605/9**

## About the Institution of Fire Engineers (IFE)

The IFE is the professional institution for those working in the fire sector. The IFE is a registered charity working for societal benefit. Founded in 1918, the IFE's mission is to promote, encourage and improve the science, practice and professionalism of fire engineering with the overall aim of protecting and saving lives.

Members of the IFE share a commitment to ensuring that the fire profession remains relevant and valued, protecting people, property and the environment from fire.

## About the IFE Awarding Organisation

The IFE's awarding organisation is non-profitmaking.

The aim of the of the awarding organisation is to encourage those who work in the sector to engage with, and develop, the critical understanding needed to operate effectively and safely and to best professional standards so that they can protect and save lives. In doing this, the awarding organisation contributes to three of the IFE's (six) over-arching strategic priorities ie:

- Facilitate awareness of fire issues and developments through the communication of ideas, knowledge, information
- Foster professionalism by establishing and maintaining pathways and recognised standards of fire professionalism and competency.
- Increase knowledge in the science, practice and professionalism of fire engineering.

All of the IFE's qualifications are designed for those working in the fire sector and to meet the above aims. Qualifications and their associated assessments (examinations and practical activities/assignments) provided by the IFE are designed, assessed and quality assured by experts with extensive experience of working within the fire sector.

## Contact Details

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# IFE Level 3 Certificate in Fire Safety

## Introduction

The IFE Level 3 Certificate in Fire Safety has been developed by the Institution of Fire Engineers (IFE), Fire Risk Assessors and Fire Safety specialists in both private sector roles and public sector roles in the Fire and Rescue Services.

The qualification focuses on the prevention and detection of fire in domestic, residential, commercial and industrial premises. It covers buildings and building materials, protection arrangements and equipment (active and passive) and fire safety principles and practices. Candidates must demonstrate their ability to explain and apply fire safety principles in different situations.

This qualification is derived from unit 2: Fire Safety within the Level 3 Diploma in Fire Science and Fire Safety. It is directly equivalent to that unit in that the content and assessment remain exactly the same. Individuals who achieve this qualification may use it towards the achievement of the Level 3 Diploma in Fire Science and Fire Safety in the same way as unit 2 is used. For information, please see - <https://www.ife.org.uk/IFE-Qualifications-with-Syllabus-Links>

## Target Audience

This qualification will be appropriate for individuals who provide fire safety advice and/or carry out fire safety assessments/audits in any of the following contexts: commercial office premises, retail premises, factories and other places of work, places of public entertainment including cinemas, theatres, dance halls and premises, alcohol licensed premises, hotels and other sleeping accommodation premises, health and other care-related premises, sports grounds, flats/high-rise residential buildings, safe storage of combustibles materials – prevention and control of fires large outdoor events, caravan and camping site safety, petrol filling stations, animal premises and stables.

It will be of interest to:

- Fire Safety/Protection Officers working in Fire and Rescue Services
- Fire Risk Assessors
- Fire/Safety Officers/Managers working in premises in the contexts listed above

## Learning Outcomes

Candidates who achieve this qualification should be able to:

- explain fire resistance in relation to different buildings and building materials
- explain the operation of fire protection equipment and assess the effectiveness of protection options in different situations
- explain and apply fire safety principles and practices in diverse contexts
- assess risks in different situations and identify appropriate action to improve safety

## Qualification Content

The content of the qualification is set out in the section entitled “Content” below. This section provides information on the range of topics that must be studied including the way that candidates need to show their understanding (ie the Assessment Objectives) and the scope/range/contexts in which they can be tested (Knowledge, Understanding and Skills).

The syllabus content is very broad and deep and therefore not all topics can be tested in all examinations. Candidates are advised to prepare for the examination by covering all topics so that they are able to provide comprehensive responses.

## Assessment

The assessment takes the form of one three-hour examination. The examination is closed-book and provides a summative assessment of the full range of learning specified in the content below.

Candidates will be required to complete **six** questions from a choice of **eight** questions. There will be 20 marks available for each of the questions.

In order to achieve a pass, candidates will be required to attain at least 40% of the 120 marks available to them via the six questions (ie 48 marks).

Candidates who answer fewer than six questions will be able to achieve a pass as long as they achieve the minimum pass mark of 48. Where candidates answer more than six questions, candidates will not benefit as only the six best responses will be included in the final mark.

Past papers for the last three years are available on the IFE website - <https://www.ife.org.uk/Qualifications/Past-Papers-and-Exam-Reports> Please see the papers (and associated examiner reports) for March examinations for the L3D2 Fire Safety unit (in the section for the Level 3 Diploma in Fire Science and Fire Safety).

Examinations are provided in English only.

## Grading and Certification

Results of examinations will be reported as follows:

Pass - this is awarded where candidates achieve a mark between the minimum pass mark of 48 marks (ie 40% of the marks available) and 71 marks (59%).

Distinction - this is awarded where candidates achieve a mark of 72 or above (ie 60% or more of the marks available).

Fail - candidates who achieve 47 marks or fewer will receive a result showing Fail. Where candidates receive 24 marks (ie 20% of the marks available) or fewer, the result will show Fail (X).

Candidates who are unsuccessful in the examination may re-sit the examination. There is no limit on the number of times that candidates may re-sit.

Note: The IFE reports results as described in the bands above. However, candidates who wish to know the specific mark awarded to them may email the IFE for this information.

## Entry Requirements

There are no formal entry requirements.

However, as the paper is provided in English only, candidates will need to be able to read English fluently in order to access the examination questions and the relevant recommended reading.

## Qualification Level

This qualification has been designed to enable candidates to demonstrate that they have attained skills and knowledge at Level 3. Other types of qualifications that are set at Level 3 include A levels, Level 3 NVQs and Level 3 Diplomas such as the IFE Level 3 Diploma in Fire Science and Fire Safety.

The qualifications regulator for England, Ofqual, has provided the following descriptors to illustrate the knowledge and understanding expected from those who hold qualifications at Level 3.

### Level 3 Knowledge Descriptor

The candidate:

- has factual, procedural and theoretical knowledge and understanding of a subject or field of work to complete tasks and address problems that while well-defined, may be complex and non-routine.
- can interpret and evaluate relevant information and ideas.
- is aware of the nature of the area of study or work.
- is aware of different perspectives or approaches within the area of study or work.

Candidates are advised to bear these descriptors in mind when preparing for assessment and when composing responses to examination questions.

## Qualification Learning Time

The length of time needed to prepare for this examination will vary depending upon the starting point for each individual.

Total qualification time is 150 hours:

- 147 hours of learning/study. Study may be self-study (please see the section on recommended reading materials below) and may include relevant employer training programmes.
- 3 hours of assessment (directed time) ie one three-hour examination.

Most candidates prepare for IFE examinations via self-study or by drawing on CPD training or training provided by their employer that covers aspects of the syllabus. Candidates are advised to cross-map their study/training against the content of the syllabus to ensure that all parts of the syllabus have been covered. Recommended reading materials are provided below.

## Progression

Candidates who are successful in achieving this qualification may consider progression to Level 4. A specialist qualification in Fire Safety is available from the IFE.

Candidates who wish to broaden their knowledge and understanding at Level 3 could consider working towards other fire-specific qualifications such as the IFE Level 3 Certificate in Passive Fire Protection, the IFE Level 3 Certificate in Fire Engineering Science or the IFE Level 3 Certificate in Fire Investigation.

Successful candidates may also consider progression towards Level 5 qualifications or degree level programmes with a focus on fire safety.

## Reasonable Adjustments

The IFE permits reasonable adjustments to be made where candidates have disabilities (including medical conditions and learning disabilities such as Dyslexia). The IFE's policy on reasonable adjustments aims to enable candidates with disabilities and other difficulties to access the IFE qualifications without compromising the assessment process or the validity of the certificate.

The policy, which includes the types of arrangements that may be made (eg additional time, use of technology) and the procedure for applying for reasonable adjustments, is published on the IFE's website - <https://www.ife.org.uk/Qualification-FAQs>. The IFE will consider all requests for reasonable adjustments. All requests for reasonable adjustments must be submitted to the IFE as all decisions on reasonable adjustments rest with the IFE.

## Booking Examinations and Additional Information on Examination Arrangements

This examination is available in March each year.

Individuals who wish to sit examinations may book examinations either through their examination centre (eg employer, IFE Branch) or they may book through the IFE. Where appropriate, the IFE will direct individuals to approach their employer or branch contact.

Information on the examination timetable and other relevant dates (such as the last date for booking examinations) for March examinations, together with the booking form, the list of venues available to candidates, the terms and conditions for candidates and additional information on examination arrangements is provided on the IFE website on 1 September each year. A separate page for each March examination session is provided on the IFE website. Information on March 2021 examinations is available at: <https://www.ife.org.uk/March-2021-Examinations>

Detailed guidance for candidates on examination arrangements is provided in the Rules and Information for Candidates booklet. This booklet sets out the rules to be followed by candidates and also the dates for publication of results and the timetable for candidates to query examination results.

## Complaints and Appeals

Procedures for making a complaint or lodging an appeal are available on the IFE website - <https://www.ife.org.uk/Qualification-FAQs>

## Information for Examination Centres

Organisations that would like to provide a venue for IFE examinations, should contact the IFE to discuss the requirements for centres – please email [exams@ife.org.uk](mailto:exams@ife.org.uk) in the first instance.

Centres will need to comply with the Terms and Conditions for centres. Information for centres, including the Centre Handbook which contains detailed guidance on running a centre, is available on the IFE website. Please see - <https://www.ife.org.uk/Information-for-Examination-Centres>. Centres are required to re-confirm their compliance with the Terms and Conditions prior to each examination session and to provide an Examination Centre Invigilation Report following the completion of examinations.

The IFE operates a centre inspection programme based on unannounced visits. All centres should anticipate visits from centre inspectors.

## Recommended Reading

This qualification covers an extensive range of contexts and candidates are advised to reflect this breadth in their examination preparation.

The IFE has applied the following criteria in determining which resources should be included on this recommended reading list:

- the resource provides information which will be of benefit to the candidate in their professional life, providing depth and breadth of understanding;
- the resource contains some information that will be relevant to part of the syllabus;
- the resource is recognised by industry professionals as providing valuable information.

Candidates preparing for the examinations are advised to refer to the list below:

- The Fire Protection Handbook, NFCC/CFOA, available online:  
[https://www.nationalfirechiefs.org.uk/write/MediaUploads/NFCC%20Guidance%20publications/Protection/DSFRS\\_Protection\\_Handbook.pdf](https://www.nationalfirechiefs.org.uk/write/MediaUploads/NFCC%20Guidance%20publications/Protection/DSFRS_Protection_Handbook.pdf)
- Relevant graphical symbols - <https://www.firesafe.org.uk/graphical-symbols-and-abbreviations-for-fire-protection-drawings/>
- Guidance documents on business and domestic fire safety available online from <https://www.gov.uk/government/collections/fire-safety-law-and-guidance-documents-for-business>
  - Fire safety risk assessment: small and medium places of assembly
  - Fire safety risk assessment: large places of assembly
  - Making your premises safe from fire
  - Fire safety risk assessment: sleeping accommodation
  - Fire safety risk assessment: educational premises
  - Fire safety: guidance for the hospitality industry
  - Fire safety risk assessment: animal premises and stables
  - Fire safety risk assessment: means of escape for disabled people
  - Fire safety risk assessment: open-air events and venues
  - Fire safety risk assessment: transport premises and facilities
  - Fire safety risk assessment: healthcare premises
  - Fire safety risk assessment: residential care premises
  - Fire safety risk assessment: theatres, cinemas and similar premises
  - Fire safety risk assessment: factories and warehouses
  - Fire safety risk assessment: offices and shops
  - Fire safety in purpose-built flats produced by the Local Government Group
- The BS 9999 handbook. Effective fire safety in the design, management and use of buildings, BSI
- Fire Detection and Fire Alarm Systems: BS 5839 Parts 1 and Part 6, The Design, Installation, Commissioning and Maintenance of Fire Detection and Fire Alarm Systems – A Guide to BS Code 5839, BSI
- Approved Document B Volume 1 - Dwelling Houses
- Approved Document B Volume 2 - Buildings other than dwelling houses

- Fire Service Manual Volume 3: Fire Safety Engineering – Basic Principles of Building Construction, TSO\*
- Fire Service Manual Volume 3: Fire Safety – Fire Protection of Buildings, TSO\*
- Guidance for the Reduction of False Alarms & Unwanted Fire Signals  
[www.cfoa.org.uk/download/49412](http://www.cfoa.org.uk/download/49412)
- A guide to health, safety and welfare at music and similar events HSG 195 HSE 1999
- [https://www.qub.ac.uk/safety-reps/sr\\_webpages/safety\\_downloads/event\\_safety\\_guide.pdf](https://www.qub.ac.uk/safety-reps/sr_webpages/safety_downloads/event_safety_guide.pdf)
- Guidance on the emergency use of lifts or escalators for evacuation and fire and rescue service operations BD 2466 [www.highrisefirefighting.co.uk/docs/guidanceemergencylifts.pdf](http://www.highrisefirefighting.co.uk/docs/guidanceemergencylifts.pdf)
- Emergency Lighting: BS 5266 <https://www.firesafe.org.uk/emergency-lighting/>
- ASFP Guide to Passive Fire Protection for Fire Risk Assessors
- ASFP Ensuring Best Practice for Passive Fire Protection in Buildings
- ASFP YouTube video – Fire protection to the structure of the building
- BWF-Certifire, Fire Doors and Doorsets Best Practice Guide
- Hardware for fire and escape doors, Code of Practice jointly published by the Door and Hardware Federation and the Guild of Architectural Ironmongers
- ASFP Grey Book - Volume 1: Fire dampers (European standards) E (integrity) & ES (integrity and leakage) classified, 2nd Edition
- Model Standards 2008 for Caravan Sites in England, Caravan Sites and Control of Development Act 1960 – Section 5 – available online
- The CFPA website also provides a number of free to download guides that cover a number of the areas in the syllabus - (<http://cfpa-e.eu/cfpa-e-guidelines/guidelines-fire-protection-form/#link-register-bottom>)

Note: \*PDF copies can be ordered through TSO <https://www.tsoshop.co.uk/Safety/Fire-Service/>

## Further Information

Further information on examination conditions is available in the IFE booklet, *Rules and Information for Candidates Taking IFE Examinations*. This booklet can be downloaded from the IFE's website.

Candidates may also find the general guide for candidates which provides information on question times and levels helpful - [https://www.ife.org.uk/write/MediaUploads/Exams/Candidate\\_Guide.pdf](https://www.ife.org.uk/write/MediaUploads/Exams/Candidate_Guide.pdf)

Please address any queries to the IFE by emailing: [exams@ife.org.uk](mailto:exams@ife.org.uk)

# Content

## 1. Building Construction

Assessment Objective	Knowledge, Understanding and Skills
1.1 Explain the fire safety implications associated with different building materials, describe their behaviour in fire situations and assess their fire safety implications	<ul style="list-style-type: none"> <li>• Timber – fire resistance of timber elements of structure and timber-framed construction.</li> <li>• Concrete – fire resistance of concrete</li> <li>• Steel – fire resistance</li> <li>• Glass – fire rated glazing systems</li> <li>• Building boards, building slabs and insulating materials</li> <li>• Sandwich panels</li> <li>• Fire retardant/fire resisting materials that can be applied</li> <li>• External cladding</li> </ul>
1.2 Explain the function of elements of structure and assess the impact of fire on them	<ul style="list-style-type: none"> <li>• Protected and unprotected steel columns</li> <li>• Beams</li> <li>• Walls – fire resistance, separation from adjacent properties</li> <li>• Stairways</li> <li>• Doors</li> <li>• Windows - exposures</li> <li>• Ceilings – fire resistance</li> <li>• Building envelope</li> <li>• Roofs</li> </ul>
1.3 Describe the different types of heating, ventilation and air conditioning systems used in buildings and explain the influence(s) they may have on a fire situation	<ul style="list-style-type: none"> <li>• Heating systems</li> <li>• Ventilation</li> <li>• Air conditioning systems</li> <li>• Stairwell pressurisation systems</li> <li>• Ventilation and smoke control systems</li> </ul>
1.4 Assess the fire safety implications of providing services in buildings	<ul style="list-style-type: none"> <li>• Electricity</li> <li>• Oil</li> <li>• Gas – Natural and Liquefied Petroleum Gas</li> <li>• Bio mass</li> <li>• Water</li> <li>• Photoelectric systems including micro generation</li> </ul>
1.5 Explain the systems and methods that support structural fire resistance (passive fire protection)	<ul style="list-style-type: none"> <li>• Separating walls including corridors</li> <li>• Compartment walls and floors</li> <li>• Junctions formed by elements of structure</li> <li>• Protected shafts and protecting structures – lifts and escalators</li> <li>• Fire resisting doors and other enclosures</li> <li>• Fire resisting ceilings</li> <li>• Fire resisting partitions</li> <li>• Active fire barrier systems</li> <li>• Atria</li> <li>• Building separation</li> <li>• External Cladding</li> <li>• Fire stopping and cavity barriers</li> </ul>

	<ul style="list-style-type: none"> <li>• Ductwork</li> <li>• Dampers</li> </ul>
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## 2. Fire Safety Principles and Fire Protection Equipment

Assessment Objective	Knowledge, Understanding and Skills
2.1 Explain and apply the principles of means of escape in case of fire	Principles of means of escape and effects of: <ul style="list-style-type: none"> <li>• Management control</li> <li>• Occupancy</li> <li>• Construction</li> <li>• Time of evacuation</li> <li>• Exits</li> <li>• Travel distance</li> <li>• Place of reasonable safety/Place of total safety</li> <li>• Dead end</li> <li>• Protected route</li> <li>• ASET (Available <i>Safe</i> Egress Time) and RSET (Required <i>Safe</i> Egress Time)</li> </ul>
2.2 Describe and assess the arrangements that need to be in place for means of escape of individuals and groups of people	<ul style="list-style-type: none"> <li>• Pre-planning arrangements for ensuring the safety of people</li> <li>• Principles of evacuation procedures that should be adopted in case of fire</li> <li>• How the behaviour of people in a fire, or potential fire, situation can adversely affect evacuation and means of escape</li> <li>• How the wellbeing of people can affect evacuation e.g. mobility, disability, health, age, size</li> <li>• Personal Emergency Evacuation Plan (PEEP)</li> </ul>
2.3 Explain and assess the use of fire precautions in the protection of people and property	<ul style="list-style-type: none"> <li>• The purpose of fire precautions in the protection of people and property</li> <li>• Use, siting and content of fire notices</li> <li>• Use and siting of different types of extinguishing systems including hand held fire extinguishers</li> <li>• Use and operation of passive fire safety systems in the protection of people and property</li> <li>• Detection systems: Smoke, Heat, Carbon Monoxide and Flame fire detection systems</li> <li>• Fire warning systems – manual and automatic</li> <li>• Emergency lighting systems</li> <li>• Principles that apply to the installation of:               <ul style="list-style-type: none"> <li>○ Smoke venting systems</li> <li>○ Fire curtains</li> <li>○ Fire barriers</li> </ul> </li> </ul>
2.4 Describe and explain the design features, installation, use, maintenance and operations of fixed installations and assessing their effectiveness in different fire suppression situations	<ul style="list-style-type: none"> <li>• Sprinkler systems – commercial, residential and domestic</li> <li>• Drencher and water spray projector systems</li> <li>• Water mist systems</li> <li>• Rising mains</li> <li>• Hose reels</li> </ul>

	<ul style="list-style-type: none"> <li>• Foam systems</li> <li>• Gas/vapour systems</li> <li>• Dry powder systems</li> </ul>
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### 3. Fire Safety Review and Advice

Assessment Objective	Knowledge, Understanding and Skills
3.1 Explain and assess the fire safety advice to be provided in specific contexts	<ul style="list-style-type: none"> <li>• Commercial office premises</li> <li>• Retail premises</li> <li>• Factories and other places of work</li> <li>• Places of public entertainment including cinemas, theatres, dance halls and premises</li> <li>• Alcohol licensed premises</li> <li>• Hotels and other sleeping accommodation premises</li> <li>• Health and other care-related premises</li> <li>• Sports grounds</li> <li>• Flats/High-rise residential buildings</li> <li>• Safe storage of combustibles materials – prevention and control of fires</li> <li>• Large outdoor events</li> <li>• Caravan and camping site safety</li> <li>• Petrol filling stations</li> <li>• Animal premises and stables</li> </ul>
3.2 Identify and assess fire hazards and risks in and around different premises	<ul style="list-style-type: none"> <li>• Define the terms “hazards” and “risks”</li> <li>• How to assess hazards, risks and fire precautions within different areas of the premises in relation to construction, layout and use</li> <li>• How to assess the type and level of risk associated with different hazards in different areas of premises</li> <li>• Identification of people who may be at risk</li> <li>• Identification of risks to property and the environment</li> <li>• Consequences of failing to identify hazards and control risks</li> <li>• Common causes of fire in different occupancies</li> <li>• Identification of suitable options to eliminate, reduce or control risk in different types of premises (including arson)</li> <li>• How to prioritise risks and solutions</li> </ul>
3.3 Review control measures in current and planned situations and recommend appropriate solutions	<ul style="list-style-type: none"> <li>• How to review the effectiveness of control measures</li> <li>• How to provide feedback on effectiveness of current control measures</li> <li>• Assess the requirements for fire protection and determine appropriate solutions</li> </ul>
3.4 Describe and explain the purpose of fire safety training and the testing of installed fire precautions	<ul style="list-style-type: none"> <li>• Training needs of workplace staff</li> <li>• Training requirements for people with fire safety responsibilities (managers, fire wardens and marshals)</li> <li>• The importance of maintaining and testing installed fire safety equipment and how the testing is conducted</li> </ul>

<p>3.5 Explain the different methods of improving fire safety awareness</p>	<ul style="list-style-type: none"><li>• Explain fire risks (including those related to arson) to members of the public and property owners/managers</li><li>• How fire related incidents can impact on business continuity</li><li>• The role of building managers in protecting people and property from the risks of fire</li><li>• Fire hazards in the community and the promotion of fire safety awareness programmes</li><li>• Development and implementation of fire safety education programmes in the community</li><li>• How to engage with minority groups within larger community areas</li></ul>
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