



THE INSTITUTION OF FIRE ENGINEERS
FOUNDED 1918 • INCORPORATED 1924

IFE Level 4 Diploma in Fire Science and Fire Safety

Qualification Specification

Qualification Number: 500/5924/5

Note: this qualification was formerly known as the Level 4 Certificate in Fire Science and Fire Safety

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.

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IFE Level 4 Diploma in Fire Science and Fire Safety

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Aims of the Qualification

The IFE Level 4 Diploma in Fire Science and Fire Safety has been developed by the Institution of Fire Engineers (IFE), representatives of Fire and Rescue services and other fire professionals such as fire risk assessors and fire investigators.

The content and structure of the qualification has been designed to provide individuals operating at a senior professional level with the technical knowledge and understanding required across all relevant fire disciplines to enable them to evaluate situations and respond to diverse and complex hazards and incidents. The qualification recognises this breadth and depth of knowledge and understanding across critical fire disciplines.

Target Audience

The qualification will meet the needs of:

- those employed in fire and rescue service roles across the world, particularly those who are either already in Station Manager (or equivalent) roles or those who wish to develop and demonstrate knowledge and understanding relevant to the role of Station Manager in preparation for promotion to this role
- those operating in specialist fire and rescue contexts such as aviation or specialist fire prevention/fire safety inspection roles who need to develop and apply a wide range of knowledge and understanding in their role
- other fire professionals who wish to demonstrate their knowledge and understanding of fire science and safety and relevant specialist areas at level 4

Learning Outcomes

Candidates who achieve this qualification should be able to:

- draw on knowledge and understanding across the specialist fire aspects when evaluating and assessing potential solutions in diverse, non-routine and complex situations
- understand and apply detailed and technical specialist approaches when addressing complex situations
- understand the value of the different fire disciplines in managing complex situations that require a multi-faceted approach
- demonstrate and apply critical understanding at level 4 in four disciplines/components

Qualification Structure and Content

In order to achieve the qualification, candidates must achieve four separate components.

Two components are mandatory ie: Fire Engineering Science and Fire Safety

Two components may be selected from:

- Fire Service Operations and Incident Command
- Aviation Fire Operations
- Leadership and Management
- Fire Investigation

Each of the components is assessed separately via IFE-set examinations. The range of content that must be studied for each component 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) is set out in separate specifications. Please see <https://www.ife.org.uk/IFE-Qualifications-with-Syllabus-Links>

From 2021, the individual components are presented as separate qualifications. However, the content and assessment is the same, and therefore equivalent in every way, to the previous unit format where the units existed within the structure of the Level 4 Certificate in Fire Science and Fire Safety.

In order to achieve the Level 4 Diploma in Fire Science and Fire Safety, candidates may use either unit achievements (where components were achieved prior to 2021) or qualification achievements (where components were achieved after 2021). Please see below for information on relevant units/qualifications and how they can be used towards achievement of the Level 4 Diploma.

Mandatory Components

Level 4 Certificate Units Achieved in 2017, 2018, 2019, 2020	OR	Achieved in 2021
L4C1 - Unit 1: Fire Engineering Science	OR	IFE Level 4 Certificate in Fire Engineering Science
L4C2 - Unit 2: Fire Safety	OR	IFE Level 4 Certificate in Fire Safety

Optional Components (two to be achieved from the following)

Level 4 Certificate Units Achieved in 2017, 2018, 2019, 2020	OR	Achieved in 2021
L4C3 – Unit 3: Fire Service Operations and Incident Command	OR	IFE Level 4 Certificate in Fire Service Operations and Incident Command
L4C4 – Unit 4: Aviation Fire Operations	OR	IFE Level 4 Certificate in Aviation Fire Operations
L4C5 - Unit 5: Leadership and Management	OR	IFE Level 4 Certificate in Leadership and Management
L4C6 – Unit 6: Fire Investigation	OR	IFE Level 4 Certificate in Fire Investigation
L4C7 – Unit 7: Civil Emergency and Disaster Management		No longer available. Unit 7 was withdrawn following the 2019 examinations

Assessment

Each component is assessed separately via written examination. The duration of the examination is three hours. Please see the separate qualification specifications for full details.

Although the components are now available as qualifications rather than units, the assessment is unchanged. This means that previous examination papers and examiner reports are still valid examples of assessment approaches and can be used in preparing for examinations. Please see the IFE's website - <http://www.ife.org.uk/Qualifications/Past-Papers-and-Exam-Reports>

Certification and Grading

Candidates achieving the required combination of components will be awarded the IFE Level 4 Diploma in Fire Science and Fire Safety. The qualification is not graded. Successful candidates will be awarded a Pass.

Candidates do not need to achieve all four components at the same examination session. Candidates who achieve fewer than four components at one examination session will receive the relevant qualification certificates. Candidates are required to achieve the four components within five years. This means that candidates who achieve relevant qualifications (components) in 2021 may combine these with achievements from 2020, 2019, 2018 and 2017.

The IFE will automatically issue a full Level 4 Diploma in Fire Science and Fire Safety certificate at the point where candidates have achieved all four of the components required.

Entry Requirements

There are no formal entry requirements.

However, candidates are advised that success in this qualification requires extensive knowledge and understanding and they should therefore ensure that they are fully prepared prior to sitting examinations. This qualification provides progression from the Level 3 Diploma in Fire Science and Fire Safety. Candidates who have previously achieved an IFE qualification at Level 3 will be able to build upon relevant knowledge and understanding. Candidates who have not achieved an IFE qualification at Level 3 are advised to refer to the Level 3 specifications in order to ensure that they have acquired relevant foundation knowledge and understanding.

Candidates should be aware that most examination questions will take the form of essay questions. Candidates will therefore need to be able to communicate effectively in writing. In addition, candidates are advised that mathematical skills will be required in order to complete the Fire Engineering Science examination and relevant calculations in other units.

Please see separate specifications for details on entry requirements for the separate qualification.

Qualification Level

This qualification has been designed to enable candidates to demonstrate that they have attained skills and knowledge at Level 4. Other types of qualifications that are set at Level 4 include: Certificate of Higher Education (CertHE), Higher National Certificate (HNC) and Level 4 NVQs.

The qualifications regulator, Ofqual, has provided the following descriptors to illustrate the knowledge and skills expected from those who hold qualifications at Level 4.

Level 4 Knowledge descriptor

The candidate:

- Has practical, theoretical or technical knowledge and understanding of a subject or field of work to address problems that are well defined but complex and non-routine.
- Can analyse, interpret and evaluate relevant information and ideas.
- Is aware of the nature of approximate scope of the area of study or work.
- Has an informed awareness of different perspectives or approaches within the area of study or work.

Level 4 Skills descriptor

The candidate can:

- Identify, adapt and use appropriate cognitive and practical skills to inform actions and address problems that are complex and non-routine while normally fairly well-defined.
- Review the effectiveness and appropriateness of methods, actions and results.

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

Qualification Learning Time

The length of time needed to complete this qualification will vary depending upon the starting point (ie previous knowledge and experience) for each individual. Due to the range of specialist components, individuals may find that some components require more time input than others.

Research suggests that the following learning time is needed for the individual components:

Component (Unit/Qualification)	Learning Time
Fire Engineering Science	150
Fire Safety	170
Aviation Fire Operations	140
Leadership and Management	160
Fire Service Operations and Incident Command	200
Fire Investigation	155

Total qualification time is based on learning time for the two mandatory components plus the learning time for the two smallest optional units. Total qualification time for this qualification is therefore 615 hours.

The 615 hours comprises:

- 603 (over 4 units) of learning - self-study/course training
- 12 hours (over 4 units) of assessment - examinations

Most candidates prepare for IFE examinations via self-study or by drawing on 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 part of the syllabus have been covered. Recommended reading materials are provided within the individual qualification documents.

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 assessments without compromising the assessment process or the validity of the certificate.

The policy, which includes the arrangements for applying for reasonable adjustments, is published on the IFE's website. The IFE will consider all requests for reasonable adjustments. All requests for reasonable adjustments must be submitted to the IFE.

Progression

Candidates who are successful in achieving this qualification may consider progression to specialist degree programmes such as BSc in Fire Engineering Science.

Booking Examinations and Additional Information on Examination Arrangements

All component examinations are available in March each year. One component examination, Fire Service Operations and Incident Command, is also available in October 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 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 in the first instance.

Centres will need to comply with the Terms and Conditions for centres. Information for centres, including the Examination 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.

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.

Please address any queries to the IFE by emailing: exams@ife.org.uk