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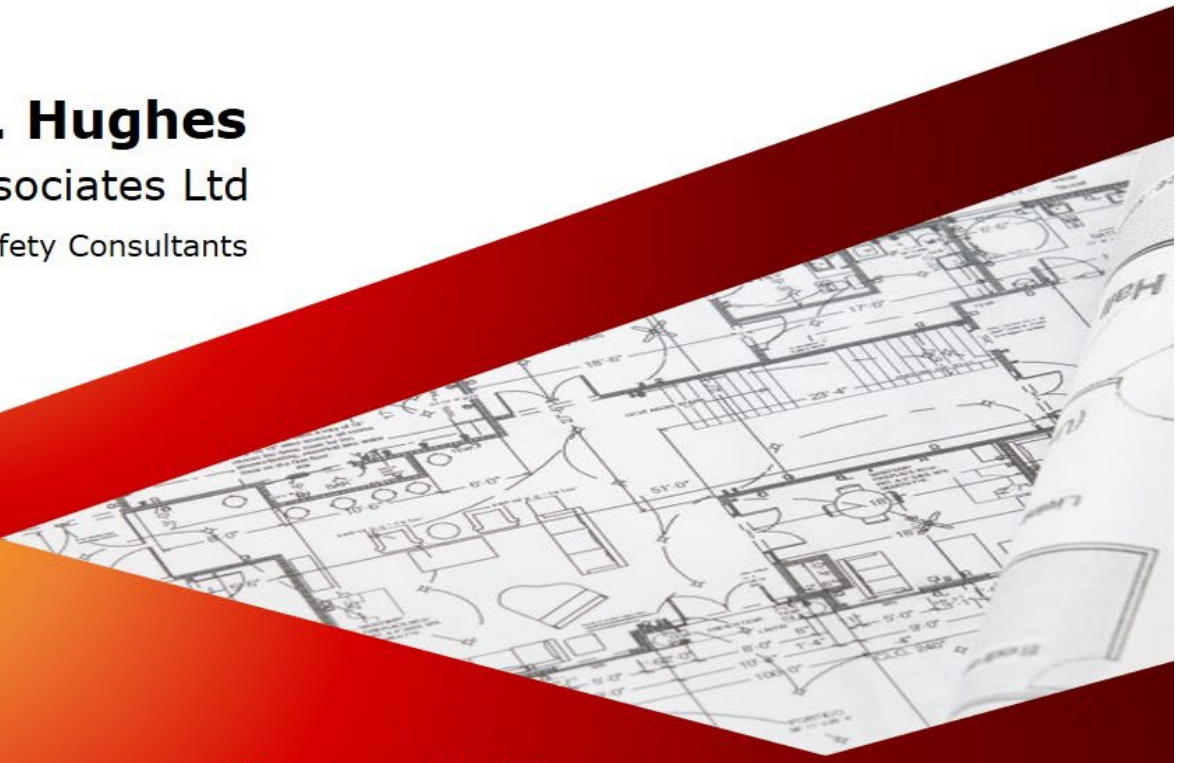

Level 5 Diploma in Fire Engineering Design

2026

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SFJ AWARDS
APPROVED CENTRE

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Level 5 Diploma
Fire Engineering Design (Technician)

Overview

The Level 5 Diploma Fire Engineering Design (Technician) qualification is for individuals who work or intend to work in a position where they are involved in auditing or risk assessing fire engineering premises and designing or assessing fire engineering design submissions.

This qualification provides individuals with a practical understanding of fundamental engineering principles, enabling them to identify proven techniques and procedures to solve practical fire engineering problems and, when appropriate, to hand over to a fire engineer.

Scope of qualification

This qualification is a combination of specialist areas of fire safety namely:

- The principles of fire safety engineering
- Fire development and spread
- Smoke control and heat exhaust systems
- Fire suppression systems
- Human Behaviour
- External fire spread
- Fire resistance of materials and structures
- Pressure differential systems
- Access and facilities for firefighting
- Fire and evacuation modelling

Who would benefit from this qualification?

This qualification is aimed at approved inspectors, fire safety auditors, inspectors, fire risk assessors, building control officers, managers, surveyors, architects and fire safety professionals so that they can work towards achieving Fire Engineering Technician status.

The National Fire Chiefs Council (formally the Chief Fire Officers Association) Competency Framework for Business Fire Safety Regulators identifies this qualification as the benchmark qualification for becoming a Fire Engineering Design Technician.

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Entry Requirements

There are no formal entry requirements although learners should be able to work at Level 4 Diploma or above, be proficient in the use of English Language and have previous experience of applying fire safety guidance such as Approved Document B (or equivalent) and BS 9999.

Prior to commencing this qualification, delegates must have the required knowledge and competence (i.e. A-level or equivalent) in mathematics. This course involves a significant amount of semi complicated mathematics which delegates will need to be capable of managing. Mathematics will not be taught on this programme.

This qualification requires a significant amount of commitment from delegates. The Total Qualification Time for this qualification is 370 hours. A large amount of time is allocated to self-study.

If you feel that due to your prior experience you could enter directly at this level, please contact us for a discussion.

Assessments

This qualification is assessed against National Occupational Standards by:

- Post-course summative open book assessment

To achieve the qualification all assessment criteria must be met.

Qualification Award

Delegates are registered with Skills for Justice Awards on commencement of this qualification. A registration fee of £84 per delegate is payable.

Upon successful completion of all units a qualification certificate is awarded to each delegate.

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PROGRAMME STRUCTURE

FED 1:	5-days (Course 1)	NOS
Unit 1	Principles of fire development and spread	FS2
Unit 2	Principles of fire engineering	FS2/FS3/FS7
Unit 6	Smoke control and heat exhaust ventilation systems	FS2/FS3/FS7

FED 2:	5-days (Course 2)	NOS
Unit 3	Review the effectiveness of automatic fire suppression systems	FS2/FS3/FS7
Unit 4	Fire engineering design and its impact on human behaviour	FS2/FS3/FS7
Unit 8	Fire engineering design and its impact on the external spread of fire	FS6

FED 3:	5-days (Course 3)	NOS
Unit 5	Fire engineering design and its impact on the fire resistance of materials and structures	FS6
Unit 7	Pressure differential systems	FS2/FS3/FS7
Unit 9	Fire engineering design and its impact on access and facilities for fire-fighting	FS6
Unit 10	Principles of fire and evacuation modelling	FS3

PRICE

Course	Duration	Open Course £	In-house Course £
FED 1	5 days	£ 1,015	£ 9,500
FED 2	5 days	£ 1,015	£ 9,500
FED 3	5 days	£ 1,015	£ 9,500
Awarding body registration fee		£ 84.00	See note [1]
	TOTAL	**Per delegate £ 3,129.00[2]**	**Per programme £ 28,500**

NOTES

1. **In addition to the above prices, an awarding body registration fee of £84 is payable per delegate.**
2. **This qualification programme will be by face-to-face delivery at a training venue located centrally in the UK. Accommodation and meals will be available in addition to the above programme fees at the following rates: 24hr delegate rate of £600 per week per delegate, or day delegate rate of £210 per week per delegate.**
3. **Should covid restrictions be in place at the time of the course that does not allow face to face delivery, the course will continue to be delivered by virtual training.**

All prices are subject to VAT at the prevailing rate

Payment by credit card incurs a 2.5% fee per transaction

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OPEN COURSE DATES

Ref	Course 1	Course 2	Course 3
L5D-15 (Chorley)	9th – 13th February 2026	11th – 15th May 2026	28th Sept – 2nd October 2026
L5D-18 (Telford)	22nd – 26th June 2026	19th – 23rd October 2026	11th – 15th January 2027

Venue details

Telford: The Telford Hotel, Spa & Golf Resort, Sutton Heights TF7 4DT

Chorley: Lancashire Fire and Rescue Service Training Centre, West Way, Euxton, Chorley PR7 6DH

For further details or to register your interest please email admin@kphughes.co.uk

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PROGRAMME CONTENT -

FED 1: Learning Outcomes

The principles of fire engineering design (NOS FS2 / FS3 / FS7)

- Understand the principles of fire engineering design
- Understand best practice for fire engineering consultations
- Be able to evaluate the effectiveness of fire engineering designs
- Be able to conduct an impact assessment of a fire engineering design

Principles of fire development and spread (NOS FS2)

- Understand how fire develops and spreads in buildings

Smoke control and heat exhaust ventilation systems (NOS FS2 / FS3 / FS7)

- Understand smoke control and heat exhaust ventilation systems
- Be able to determine a suitable design fire
- Be able to determine the mass flow of smoke and temperature in smoke layers
- Be able to evaluate smoke control and heat exhaust ventilation system components

FED 2: Learning Outcomes

Review the effectiveness of automatic fire suppression systems (NOS FS2 / FS3 / FS7)

- Understand the principles of automatic fire suppression systems
- Be able to assess the effectiveness of sprinkler systems
- Be able to evaluate the effectiveness of water mist systems
- Understand the principles of oxygen reduction systems
- Understand the principles of gaseous, foam systems and other fire suppression systems

Fire engineering design and its impact on human behaviour (NOS FS2 / FS3 / FS7)

- Understand the effect of fire on human bodies and behaviour
- Understand how fire engineering design impacts on human behaviour and Safe Egress Times
- Be able to review the impact of fire engineering design on human behaviour

Fire engineering design and its impact on the external spread of fire (NOS FS6)

- Understand how fire engineering design impacts on the external spread of fire
- Be able to apply fire engineering design to the external spread of fire requirements

FED 3: Learning Outcomes

Fire engineering design and its impact on the fire resistance of materials and structures (NOS FS6)

- Understand the effects of fire on materials and structures
- Understand how fire engineering design impacts on the fire resistance of materials and structures
- Be able to review the impact of a fire engineering design on the fire resistance of materials and structures

Pressure differential systems (NOS FS2 / FS3 / FS7)

- Understand pressure differential systems
- Be able to evaluate existing pressure differential systems
- Be able to evaluate a simple pressure differential system design
- Be able to evaluate the effectiveness of the maintenance and commissioning programme for pressure differential systems

Fire engineering design and its impact on access and facilities for fire-fighting (NOS FS6)

- Understand how fire engineering design impacts on the access and facilities for fire-fighting
- Be able to apply fire engineering design to the access and facility requirements for fire-fighting

Principles of fire and evacuation modelling (NOS FS3)

- Understand principles of fire and evacuation modelling
- Understand how to identify suitable fire and evacuation models

Course reference documents

- Please see the Skills for Justice Awards L5 Diploma in Fire Engineering Design qualification handbook

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Booking Information

The information given in this prospectus provides an overview of the qualifications and courses that we offer. If you wish any further information or you wish to make a booking please email admin@kphughes.co.uk or call us on 07736 123924.

Course Materials

In support of our commitment to the climate change agenda, KPHA training materials are provided in electronic format only.

Internet links are provided for copyrighted reference documents and guides. Some of which are freely downloadable, others that may require purchasing should be supplied by the client.

Open Courses

KPHA open course programmes will remain as virtual delivery until further notice.

Payment must be received 30 days prior to the commencement of the course or training provisions. In the case of qualifications, training provisions commence on the issuance of any pre-course learning.

In-house Courses

The cost is inclusive of tutor travel, food and accommodation and training notes and course workbooks (electronic format).

Suitable facilities are to be provided by the customer for in-house courses. A list of the required facilities will be provided to the client upon making a booking enquiry.

Delegate numbers:

Delegate numbers are limited to 16.

Payment Terms

Payment must be made strictly within 30 days of the invoice date.

Booking Amendments and Cancellations

Please contact us as soon as possible if you wish to cancel or postpone a booking. In the event that you need to cancel your booking the following fees will be charged:

- More than eight weeks prior to the start of a course or training provisions no course fee will be payable
- Four to eight weeks prior to the start of a course or training provisions 50% of the total course fee will be payable
- Less than four weeks prior to the start of a course or training provisions 100% of the total course fee will be payable

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Course Updates and Amendments

We reserve the right to change the details and content of courses without notice in order to ensure we reflect current best practice and developments in the sector.

Published open course dates may be subject to change. Please check the website for latest dates.

We reserve the right to amend our prices from those published in this prospectus. Confirmed bookings will be charged at the agreed price. Please refer to our website for latest details https://kphughes.co.uk

VAT

VAT will be added at the prevailing rate to all prices published by KPHA Ltd.

Terms and Conditions

Our full terms and conditions are available at https://kphughes.co.uk/policies-and-terms

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