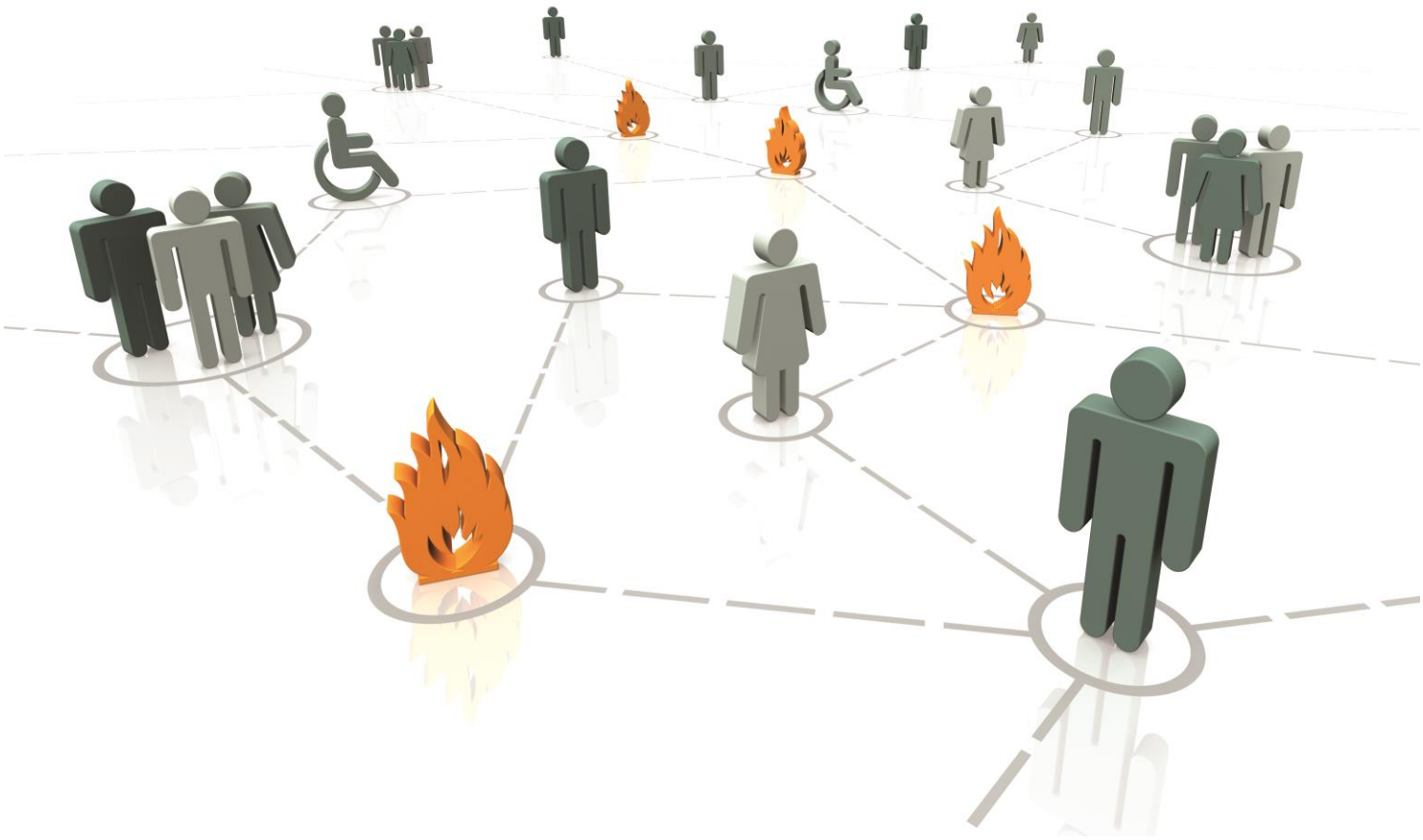
iVC™ Interactive Virtual Classroom

XACT™

# BS 9251: Residential Sprinkler Design

## Course and qualification options

SFJ AWARDS



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# 1. Introduction

## 1. Introduction

This document is designed to help individuals and organisations inform their training decisions by explaining course options available in designing residential fire sprinkler systems.

### 1.1 Target audience

Individuals who design, or plan to design residential sprinkler systems.

### 1.2 Qualification: Level 3 Certificate in Residential Sprinkler Design

See Section 2 for details about the sprinkler design qualification.

### 1.3 Course modules

There are:

i) Module 1: Category 1 sprinkler system design: Design course 1: Five days
ii) Module 2: Sprinkler system quotations: Distance learning
iii) Module 3: Complex sprinkler system design: Categories 2-4: Design course 2: Four days
iv) Module 4: Professional discussion: Virtual discussion

**Note**: See Section 3 for more details about sprinkler courses.

#### 1.3.1 Qualification Option

Qualification: All four modules will require completion to achieve qualification

#### 1.3.2 Category 1[1]: Sprinkler system design[2]

Complete Module 1: Five-day course.

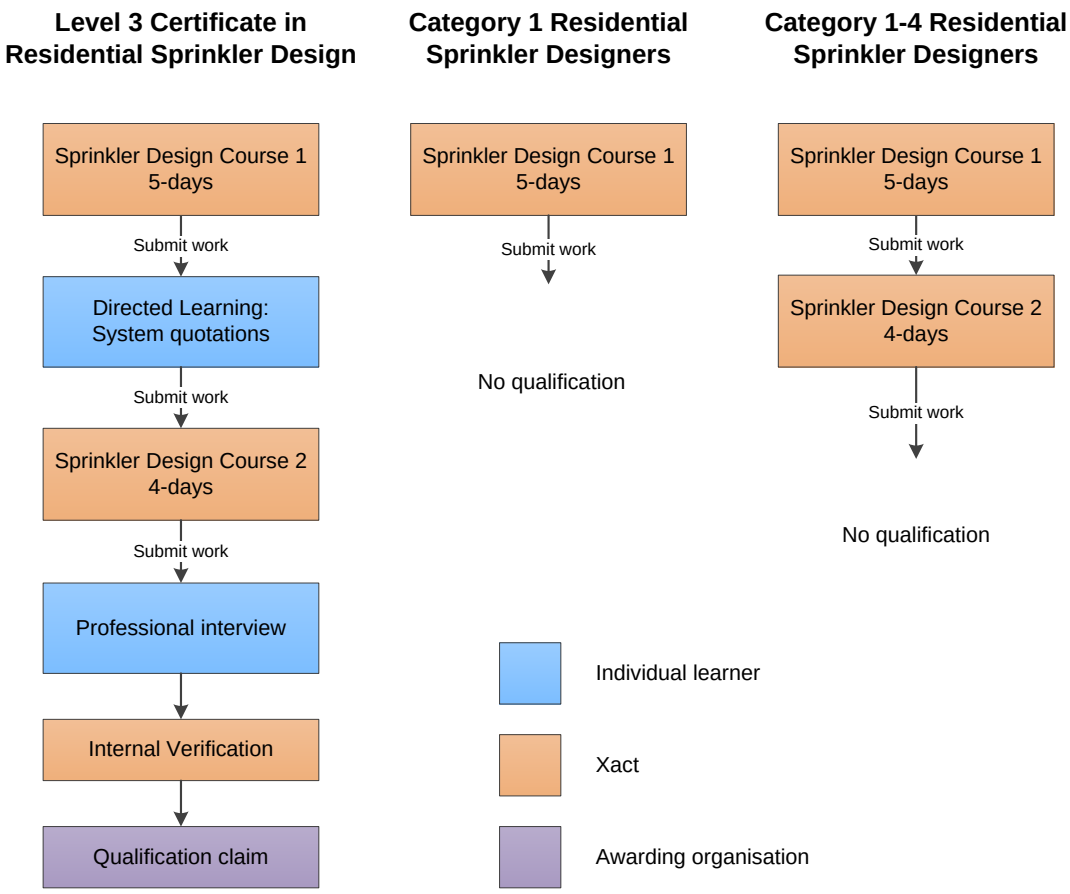
**Note[1]**: i.e. house, bungalow
**Note[2]**: Qualification not available with this option

#### 1.3.3 Category 1-4: Sprinkler system design[1]

Complete: Module 1: Five-day course and Module 3: Four-day course

**Note[1]**: Qualification not available with this option

### 1.3.4 Course and Qualification Flowchart




## 1.4 Entry requirements

Individuals should:

a) have ability to work at Level 3 or above
b) be proficient in use of English Language
c) be able to use a scientific calculator
d) provide a Microsoft computer[1]
e) ability to use computers, related technology and sprinkler design software[1]

**Note[1]**: Only required for Sprinkler Design Course 2

## 1.5 Course delivery

Modules 1 and 4 are normally delivered face-to-face. There may be occasions when they provided virtually. Please see Section 5 iVC for more information.

## 1.6 Course costs

See Section 4 for more details.

### 1.7 Open course locations

See Section 4 and website for more information about course location.

### 1.8 Open course dates

See website link for sprinkler courses. Dates are located on the right side of each course page

### 1.9 Booking

Once you have selected the required sprinkler course, use “Book course” icon on webpage for online booking.

### 1.10 Terms and conditions

Terms and conditions apply. Please follow our website link for a copy of our Terms and Conditions or contact us on courses@xact.org.uk to request a copy. All orders and bookings made will be subject to our terms and conditions.

# 2. Level 3 Certificate in Residential Sprinkler Design

## 2.1 Introduction

This qualification is provided via awarding organisation Skills for Justice Awards. For more information about this qualification and SFJ Awards, see their website.

SFJ Awards specialises in the fire safety sector and is regulated Ofqual. Xact is an Approved Centre for this awarding organisation.

## 2.2 Qualification and units

This qualification which consists of four mandatory level three units has been designed *"is to provide individuals with the practical skills, technical knowledge and understanding to provide quotations and designs for residential sprinkler systems."*

| Unit | Unit Title | GLH[1] | TQT[2] |
|---|---|---|---|
| 1 | Identify requirements for Residential Sprinkler Systems | 15 | 25 |
| 2 | Identify requirements for Designing Residential Sprinkler Systems | 15 | 30 |
| 3 | Design Residential Sprinkler Systems | 40 | 60 |
| 4 | Produce quotations for Residential Sprinkler Systems | 15 | 30 |

**Note[1]**: Guided learning hours (GLH): The number of hours with specific guidance towards learning.

**Note[2]**: Total qualification time (TQT): GLH plus number of hours a learner will reasonably be likely to spend in preparation, study or any other form of participation in education or training, including assessment.

## 2.3 Cross mapping of modules with qualification units

The table below cross maps activities with qualification units

| Module | Module Title | Units covered[1] |
|---|---|---|
| 1 | Category 1 Residential sprinkler system design | 1, 2, 3 |
| 2 | Sprinkler System Quotations | 4 |
| 3 | Category 2-4 Residential sprinkler system design | 1, 2, 3 |
| 4 | Professional Discussion | 1, 2, 3, 4 |

**Note[1]**: Some units are covered over more than one module

### 2.4 Qualification requirements

Government regulator Ofqual provides the following guidance on the requirements for individuals to demonstrate that they possess the following knowledge for a Level 3 qualification:

#### 2.4.1 Knowledge requirements

a) 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.
b) Can interpret and evaluate relevant information and ideas.
c) Is aware of the nature of the area of study or work.
d) Is aware of different perspectives or approaches within the area of study or work.

#### 2.4.2 Skill requirements

a) Can identify, select and use appropriate cognitive and practical skills, methods and procedures to address problems that, while well-defined, may be complex and non-routine.
b) Can use appropriate investigation to inform actions.
c) Has the ability to review the effectiveness of methods and actions

# Module 1: Category 1 Residential sprinkler system design

**Target audience**

Individuals who design, or plan to design Category 1[1] residential sprinkler systems.

**Note[1]**: i.e. house, bungalow

**Aim**

To enable individuals to design Category 1 residential sprinkler systems.

**Core content**

- Consultation process and sprinkler specification
- System enhancements and resilience
- System categories
- Design density, supply duration and area of coverage
- Non-residential occupancies
- Sprinkler head suitability, location and spacing
- Water supplies, towns mains, tanks and pumps
- Pipework and valve configuration
- Designing sprinkler systems using scientific calculators:
    - Loss calculations; K factor, Hazen Williams
    - Calculating most hydraulically unfavourable and favourable areas
    - Selecting water supply
    - Pump curves and tank calculations
- Frost protection options
- Alarm requirements and configuration
- Certification and documentation

**Duration**

5 days

**Module assessment**

Individuals will be assessed on their ability to design a Category 1 sprinkler system to BS 9251.

**Prior learning**

See Section 1.4

# Module 2: Sprinkler System Quotations

**Target audience**

Individuals who quote, or plan to quote for residential sprinkler system installations.

**Aim**

To enable individuals to quote for the installation of a sprinkler system to BS 9251.

**Core content**

- Gathering information required to provide quotes
- Identifying suitable components
- Estimate water supply requirements
- Identifying costs of installation
- Providing quotations

**Duration**

Directed Learning - self-study

**Module assessment**

Individuals will be assessed on their ability to produce a quotation for a sprinkler system

**Prior learning**

Completed Module 1

# Module 3: Category 2-4 Residential sprinkler system design

**Target audience**

Individuals who design, or plan to design Category 2-4 residential sprinkler systems.

**Aim**

To enable individuals to design Category 2-4 residential sprinkler systems.

**Core content**

- Consultation process and sprinkler specification
- System enhancements and resilience
- System categories
- Design density, supply duration and area of coverage
- Non-residential occupancies
- Sprinkler head suitability, location and spacing
- Water supplies, towns mains, tanks and pumps
- Pipework and valve configuration
- Designing sprinkler systems using Canute FHC design software:
    - Loss calculations; K factor, Hazen Williams
    - Calculating most hydraulically unfavourable and favourable areas
    - Selecting water supply
    - Pump curves and tank calculations
- Frost protection options
- Alarm requirements and configuration
- Certification and documentation

**Duration**

4 days

**Module assessment**

Individuals will be assessed on their ability to design Category 2-4 sprinkler systems to BS 9251.

**Prior learning**

Completed Module 1

## Module 4: Professional Discussion

**Target audience**

Individuals who design, or plan to design and quote for residential sprinkler systems.

**Aim**

To enable individuals to design and quote for residential sprinkler systems.

**Discussion topics**

Individuals are notified beforehand of the topics to be covered during the discussion and will include areas covered in Modules 1-3

**Duration**

Virtual discussion – approximately one hour

**Module assessment**

Individuals will be assessed on their ability to confirm their ability to design and quote for residential sprinkler systems.

**Prior learning**

Completed Modules 1, 2, 3

# 4. Open Course Costs

| Module | Page | Activity | Duration | Open |
|---|---|---|---|---|
| 1 | 6 | Category 1: Residential sprinkler system design | 5 days | 950 |
| 2 | 7 | Category 1: Sprinkler System Quotations | NA | 120 |
| 3 | 8 | Category 2-4: Residential sprinkler system design 2 | 4 days | 850 |
| 4 | 9 | Professional Discussion - Virtual | NA | 100 |
| | | Qualification Registration fee | | 60 |
| | | **Total costs** | | **£2,080** |

**Notes**:

**Note[1]:** **Open courses** are normally located at conference centre in Stone, Staffordshire. See **website** for venue details.

**Costs include** teaching facilities, refreshments and lunch during teaching day. Additional charge for bed, breakfast and evening meal – see Note[2].

**Note[2]:** **Overnight accommodation** with en-suite facilities, plus breakfast and evening meal is available. These can be booked directly with the venue, please see our website for booking details

**Note[3]:** **VAT** will be added at the current rate.

**Note[4]:** **Payment terms**: Invoices must be paid in advance of commencement of activity.

# 5. **iVC** Interactive Virtual Classroom

### 5.1 iVC Individual Requirements

Individuals require the following to participate in iVC:

- Laptop: Integral web camera, microphone, speakers or equivalent
- Internet connection
- Ability to receive course notes by post directly to home address or posted to work address from where notes can be forwarded to home address

### 5.2 iVC Delivery

iVC means individuals can access Xact's high quality training safely and securely while enjoying real-time, face-to-face contact with expert tutors.

Highly trained in our innovative format, they facilitate interactive learning where individuals are actively engaged in the learning process from the safety and convenience of their own preferred locations.

With **iVC**, customers save on accommodation and travelling fees while ensuring that individuals can train from home, if necessary. And it is family friendly too - welcomed by employees who prefer not to stay away from their own locations overnight to receive training.

Customers who experience **iVC** training courses are impressed with the polished, professional presentation and how easy it is to:

a) View and interact with expert tutors and other course attendees
b) Ask questions, discuss and share ideas
c) Work in syndicates
d) Enjoy enhanced learning via video, PowerPoint, virtual reality exercises

### 5.3 iVC Provision

On all **iVC** courses, Xact provides:

a) Two tutors with experience and expertise in course subject areas
b) Course design
c) Comprehensive course manuals
d) Exercises to practise learning outcomes
e) Reference documents
f) Course evaluation and assessment

### 5.4 Restrictions to using iVC software:

Common restrictions to using iVC software:

a) Poor broadband connection
b) VPN connections restrict video and audio. software may not function unless VPN is disabled
c) Some company systems are locked down preventing access. Either request that your IT department lifts the restriction on your device to access software or use an alternative unrestricted device

### 5.5 iVC Software Security

Download details about the **security** measures imbedded in our **iVC** software.

# 6. XLE: On-line Portal

### 6.1 XLE: Xact Learning Environment

A secure area of Xact's website built on Moodle educational platform used by schools, colleges and universities which gives customers and users access to:

### 6.2 Guidance Notes

Such as educational process, responding to questions, related policies and procedures.

### 6.3 Course reference documents

Reference documents used on the programme are provided either online or within course folder.

### 6.4 Submission deadlines

On-line calendar detailing deadlines.

### 6.5 Electronic submissions

All activity is submitted electronically online, enabling individuals to upload course work using electronic formats e.g. word and pdf.

### 6.6 Similarity check

Turnitin software is used to check submitted documents for originality using its database containing fire safety guidance and legislation, previous submissions and content of other websites with the aim of identifying plagiarism. This facility, which is used by colleges and universities, is applied to all submissions.

### 6.7 Assessor Reports

Assessor reports and feedback are available on the XLE portal.

# 7. Company Details

| | |
|---|---|
| Company: | Xact Consultancy and Training Limited |
| Company Registration No: | 05295715 |
| VAT Registration No: | 855 4570 04 |
| Web site: | www.xact.org.uk |
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**Insurance**

Xact are insured for:

Public and Employers Liability

Professional Indemnity

**Office**

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