

Course Candidate Guide

BAFSA Design

High Rise and Non-Storage Sprinkler Systems Using Full Hydraulic Calculations

Candidate Name	
Company	
Course Date attended	

Overview of your qualification :

Qualification size and credit

This course relates to the classification & design of High Rise and Non-Storage Sprinkler Systems Using Full Hydraulic Calculations in accordance with the LPC rules incl. BS EN 12845.

The size of the qualification can also be indicated by the terms; award, certificate or diploma (TBC). These terms reflect the size of the qualification rather than its difficulty.

The qualification levels indicate the complexity of the qualification.

- An Award indicates a small-sized qualification that has a TQT value of 120 hours or less
- A Certificate indicates a medium-sized qualification that has a TQT value in the range of 121-369
- A Diploma indicates a large-sized qualification that has a TQT value of 370 or more.

Course duration:

10 Days Virtual Classroom with coursework.

Followed by regular submission of formal course work to be completed and uploaded within 12months from the end of the Virtual Classroom.

Coursework '1' - Is a series of Questions that have to be answered.

Coursework '2' - Is a series of Hydraulic Questions that have to be answered.

Coursework '3' - Is a Hand calculation using the Hazen Williams formula

Coursework '4' - Is an NPSH Calculation

Coursework '5' - Is a series of Questions that have to be answered.

Coursework '6' - Is a question relating the pump sizing of a precalculated High rise installation.

Coursework '7' - Is a question relating the pump sizing of a calculated High-rise installation.

Coursework '8' - Is a hydraulic calculation which shall be carried out on a tree system
(Using a calculation package).

Coursework '9' - Is a hydraulic calculation which shall be carried out on a Loop system
(Using a calculation package).

Coursework '10' - Is a hydraulic calculation which shall be carried out on a Grid system
(Using a calculation package).

Coursework '11' - Is an essay analysing the findings and difference between a tree, loop and grid system calculation.

Coursework '12'

Using the results from the previous tree system calculations you will need to develop a figure 9 curve and work out the required :

1. Suction pipe size
2. NPSH Calculation
3. Effective tank capacity and Size

Coursework '13' - Work out the classification, system type and carry out a calculation.

Coursework '14' - Is a hydraulic calculation which shall be carried out on a school (Using a calculation package).

Coursework 'Final Project'

Is a Submit 1 design high Rise

High Rise project for non-storage purposes, it can be a school, retail unit or office – it's your choice.

The design can be one you have carried out during your work or an adapted piece of work you have done, where you may need to add a pumphouse or carry out a calculation on a pre calculated system you have completed.

It must have a Superior supply pumphouse.

Submit 1 design Fhc

Submit a Fully Hydraulically calculated project for non-storage purposes, it can be a school, retail unit or office – it's your choice.

The design can be one you have carried out during your work or an adapted piece of work you have done, where you may need to add a pumphouse or carry out a calculation on a pre calculated system you have completed.

It must have a Superior supply pumphouse

This qualification covers:

- Classification and design of High-rise sprinkler systems in accordance with LPC Rules inc BS EN 12845.
- Design of Non-Storage Sprinkler systems using Full Hydraulic calculation methods

The qualification consists of:

- Unit 1 - Classification and Design of High-Rise sprinkler systems.
- Unit 2 - Basic Hydraulics
- Unit 3 - Classification of Non-Storage sprinkler systems
- Unit 4 - Pipework Sizing using Full Hydraulic Calculations
- Unit 5 - Water supply Design for High Rise and Full Hydraulic Calculated Systems

This course relates to the classification and design of High Rise and Non-Storage Sprinkler Systems Using Full Hydraulic Calculations in accordance with the LPC rules incl. BS EN 12845. The course aim is to address the knowledge and skills required to classify and design a high rise and non-storage sprinkler systems using full hydraulic calculations.

Successful completion of the programme will require :

- Attend 10 days during the virtual classroom
- Completion of the 15 off pieces of course work within a set timescale.
- Attend a Technical interview (Which will be recorded)

Note : Candidates who miss any of the days from the virtual classroom will need to catch up in their own time, the classroom is not recorded, only guidance can be given through the monthly “open forums” that are available for 16 months from the start of the course.

Methods of assessment : Continuous Assessment including:

- Participation in the virtual classroom, course theory and discussions sessions including sharing of experience, questioning and feedback.
- Completion of assessment at the end of each section of the course
- The candidate will have to submit the formal coursework onto the Bafsa Portal.
- Exam (as detailed in Annex ‘A’)
- Carry out a Technical Interview.

Your Tutor does not check your work, this is carried out by an independent assessor, one in every 5 assessments are verified by a second assessor, on occasion we may have your work assessed by a third assessor if your submission is not clear.

You may not get feedback if you pass the minimal requirements, however you will get feedback if you fall short of the minimal requirements.

We will endeavour to check your work as it is submitted, your assessor will need between 4-6 weeks to check your work for each submission.

Therefore we require your work to be uploaded in the timescales, if your submission is late, you will not be given a chance to resubmit your work, if you submit your work on the above within the time scales, you will have 4 weeks to resubmit your work on the tutors comments, you only get one chance to resubmit your work, if your work falls short of the minimal requirements you will need to retake the course.

Course Pass criteria

- Attend 90% of 10 days of the vitrail classroom
- Pass mark for the formal assessments : 70%.
- Attend a Technical Interview.

Post-Course Video Evidence (Mandatory) must be uploaded via BAFSA E-portal from the start of the course (virtual classroom).

Course work 1	- To be uploaded within 1 months of the start of the course
Course work 2	- To be uploaded within 2 months of the start of the course
Course work 3	- To be uploaded within 3 months of the start of the course
Course work 4	- To be uploaded within 4 months of the start of the course
Course work 5	- To be uploaded within 5 months of the start of the course
Course work 6	- To be uploaded within 6 months of the start of the course
Course work 7	- To be uploaded within 7 months of the start of the course
Course work 8	- To be uploaded within 8 months of the start of the course
Course work 9	- To be uploaded within 9 months of the start of the course
Course work 10	-To be uploaded within 10 months of the start of the course
Course work 11	- To be uploaded within 11 months of the start of the course
Course work 12	- To be uploaded within 12 months of the start of the course
Course work 13	-To be uploaded within 13 months of the start of the course
Course work 14	- To be uploaded within 14 months of the start of the course
Final Project	- To be uploaded within 18 months of the start of the course

Failure to Submit the work within the timescales may affect your ability to successfully compete the course.

Role of the staff team: Course Manager, Course Tutor, Assessor, Internal Verifier, Administrator, BAFSA

Course Manager: Alan Crichton

- Oversees quality assurance.
- Issues deadlines.
- Manages certification approval.

Tutor:

- Delivers the In Person course.

Assessor :

- Marks coursework.
- Provides Feedback

Centre Co-Ordinator :

- Allocates Assessor
- Will Chase candidates who don't upload coursework in time.

Internal Verifier:

- Samples 20% of submissions.
- Ensures marking consistency.

BAFSA:

Manages e-portal and CRM system providing a platform for evidence submission storage and recording training activity, Manages booking, enrolment, extension and course queries through the e-portal.

Please contact BAFSA using the 'Get in Touch' button on the Home Page of the e-portal with any query or request you may have concerning your programme.

Support & Support and Guidance

Guidance from your Tutor:

You will be invited to a monthly "Open Forum" for 1 hour per month where you can ask questions for technical queries and guidance, this will last for 18 months from the start of the course.

Guidance from your Assessor:

Once your assessor has marked your work and provided feed back contact can be arranged for any questions.

Please contact BAFSA using the 'Get in Touch' button on the Home Page of the e-portal with any query or request you may have concerning your programme.

British Fire Sprinkler Association

Enrolment

You have enrolled on this course via BAFSA (British Automatic Fire Sprinkler Association).

Your course is delivered and assessed by the Fire Systems Academy (a BAFSA Preferred Provider) BAFSA does not have any active part in delivery of assessment.

Who do you contact if you need a programme extension ?

Extensions to programmes are considered on an individual basis. Your training activity/record will be considered along with your request. Please contact BAFSA using the 'Get in Touch' button on the Home Page of the e-portal with your request. Your Course Manager and Assessor will be involved in any final decision. You will be notified in writing of any change agreed to your programme end date.

BAFSA e-learning portal

The BAFSA eLearning portal (<https://training.bafsa.org.uk/>) is an online platform for training, qualification, and CPD (Continuing Professional Development) in fire sprinkler systems. It provides both members and non-members with access to interactive, industry-specific courses—including free awareness training and paid, accredited qualifications—that can be completed at the learner's own pace.

Key features and details include:

Accessibility: The portal is available 24/7, with content designed for individuals working in the industry or seeking to enter it.

Registration: Users must register individually with a personal email address to access content.

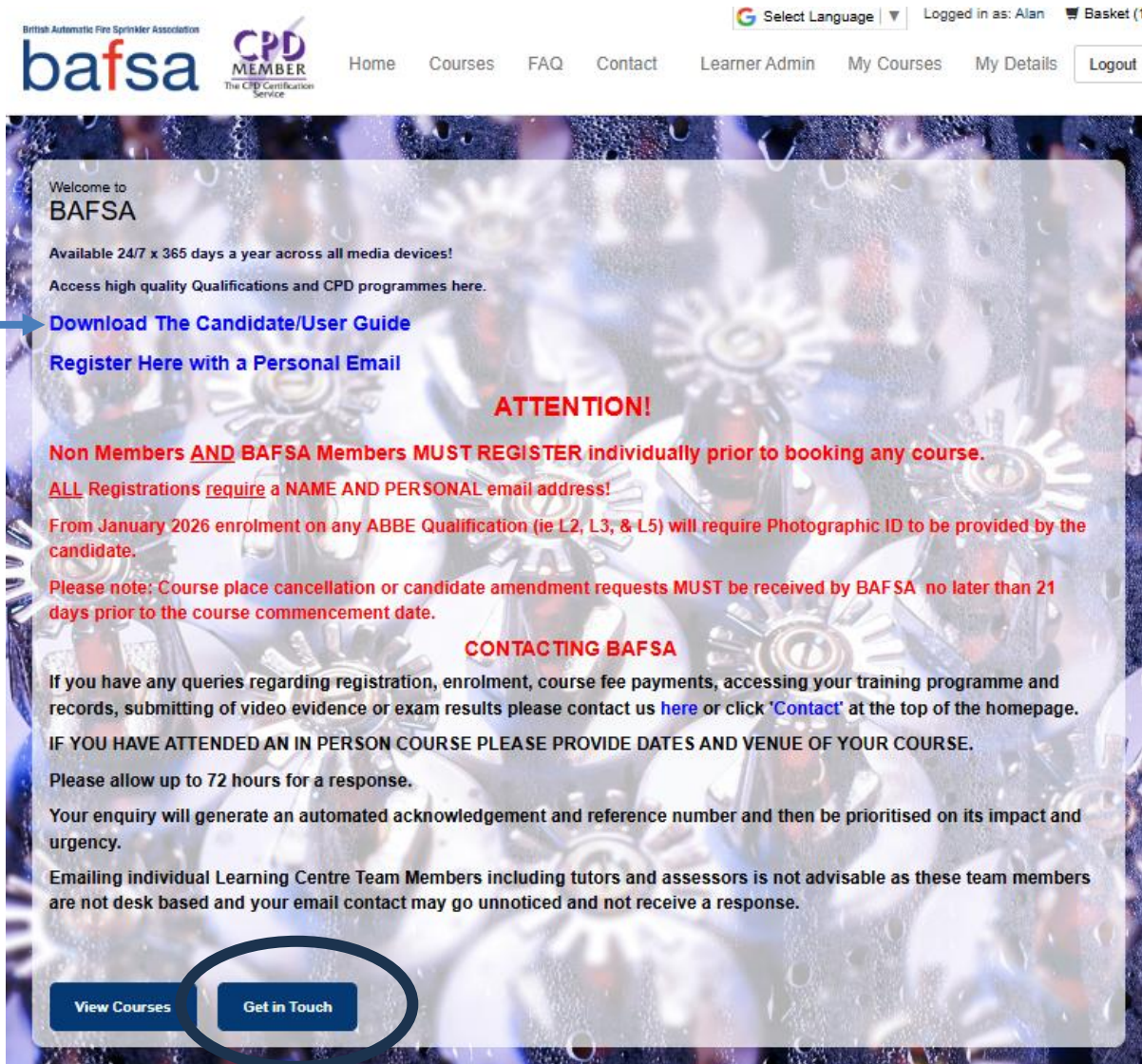
Support: The platform serves as a hub for tutors and candidates to manage their learning journeys.

How do I access the e-learning portal ?

[BAFSA - eLearning Platform](#)

Guidance on how to use the Learning Portal to upload the course work

[BAFSA Portal User Guide July 2025 Version Portal & Candidate Management.pdf](#)



British Automatic Fire Sprinkler Association

bafsa CPD MEMBER The CPD Certification Service

Home Courses FAQ Contact Learner Admin My Courses My Details Logout

Select Language | Logged in as: Alan | Basket (1)

Welcome to
BAFSA

Available 24/7 x 365 days a year across all media devices!
Access high quality Qualifications and CPD programmes here.

[Download The Candidate/User Guide](#)
[Register Here with a Personal Email](#)

ATTENTION!

Non Members AND BAFSA Members MUST REGISTER individually prior to booking any course.
ALL Registrations require a NAME AND PERSONAL email address!
From January 2026 enrolment on any ABBE Qualification (ie L2, L3, & L5) will require Photographic ID to be provided by the candidate.
Please note: Course place cancellation or candidate amendment requests **MUST** be received by BAFSA no later than 21 days prior to the course commencement date.

CONTACTING BAFSA

If you have any queries regarding registration, enrolment, course fee payments, accessing your training programme and records, submitting of video evidence or exam results please contact us [here](#) or click 'Contact' at the top of the homepage.
IF YOU HAVE ATTENDED AN IN PERSON COURSE PLEASE PROVIDE DATES AND VENUE OF YOUR COURSE.
Please allow up to 72 hours for a response.
Your enquiry will generate an automated acknowledgement and reference number and then be prioritised on its impact and urgency.
Emailing individual Learning Centre Team Members including tutors and assessors is not advisable as these team members are not desk based and your email contact may go unnoticed and not receive a response.

[View Courses](#) [Get in Touch](#)

What if I forget my password ?

Contact BAFSA using the 'Get in Touch' button on the e-portal home page
A new password will be generated and sent to you.

Your course book and workbooks

You will receive a link providing access to your electronic workbook.

If you would prefer a hard copy these can be purchased through the Fire systems Academy's Shop

<https://www.firesystemsacademy.co.uk/product-category/workbooks/>

If any materials are missing, notify the administrator immediately.

Material you require for the course

You must have access to:

- LPC Rules inc BS EN 12845.
- Up to date LPC Technical Bulletins.
- A Good Internet Connection
- A Quiet Space to Learn
- a scientific Calculator (not an iPhone)

Computer programmes required to complete the Course.

You must have:

- Microsoft Word or equivalent.
- Excel or equivalent.
- AutoCAD or drawing program.
- Hydraulic Calculation Program
- Web cam which must be on at all time during the virtual classroom.
- Stable internet connection (minimum recommended 10 Mbps)

Progress reviews (Monthly)

- A monthly reminder email will be provided.
- Candidates must demonstrate progress by meeting the post course work submission dates.
- Extension requests must be submitted via BAFSA E-portal before programme 4 weeks before the deadline.

<https://training.bafsa.org.uk/home.aspx>

Please contact BAFSA using the 'Get in Touch' button on the Home Page of the e-portal with any query or request you may have concerning your programme.

Individual assessment arrangements

If you require additional time, accessibility adjustments, alternative submission format, or technical assistance, you must notify the Centre Coordinator as early as possible.

Reasonable adjustments will be applied where appropriate.

Methods of assessment we will use

Your course work will be assessed by your allocated assessor

Written feedback will be issued via BAFSA e-portal

If elements are below standard, only failed sections require resubmission.

Resubmission deadline: 4 weeks from feedback.

Further reassessment beyond this may require re-enrolment.

Opportunity for you to provide feedback

Candidates may provide feedback at course completion, during submission period, or following certification via email or via BAFSA Course Evaluation Questionnaire issued automatically following course completion

Making a complaint and Assessment Appeals

The Fire Systems Academy and BAFSA have written individual Complaints & Appeals Policy

In the first instance you must talk with your Course Manager – Alan Crichton
Early discussion is advised.

If you need to raise a formal complaint then you must follow the Fire Sprinkler Academy Complaints & Appeals Policy or BAFSA Complaints & Appeals Policy (available from the BAFSA eportal).

Fire systems academy's policies can be issued on request.

Ensuring the authenticity of your work and malpractice procedures

You must confirm that all submitted work are your own.

The following are prohibited:

- Using coursework completed by others.
- using companies standard pump house or containerised pumphouse drawings.
- Using AI to Generate Answers
- Recording virtual classroom sessions.
- Copying course workbook content.

Malpractice may result in fail outcome, removal from programme, employer notification, or certification withdrawal.

Data management including General Data Protection Regulations (GDPR)

All personal data is stored securely and retained for 3 years (assessment records) on the BAFSA e-portal.

Technical Interview Videos retained for 12 months.

Processed in accordance with UK GDPR and you may request access to your data at any time.

Do you understand the requirement of the Formal Course submissions

Course work 1	- To be uploaded within 1 months of the start of the course
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All evidence is to be provided within the timescales provided.

I also understand that the workbook shall not be copied or at any point.

Any online courses may be recorded at any time by Bafsa or the Fire systems academy.

All Course materials are copyright protected.

Workbook may not be copied or distributed.

Virtual classroom may not be recorded.

Screenshots may not be taken.

Materials may not be shared with third parties.

Breach may result in removal from course and potential legal action.

Candidate Declaration

I confirm that I have received, read, and understood the Candidate Induction Guidance Document and the requirements outlined within it.

I understand the assessment requirements, submission deadlines, authenticity requirements, and malpractice policies.

Candidate Name : _____

Candidate Company: _____

Signature : _____

Date : _____