

Faculty of Engineering  
and Physical Sciences



UNIVERSITY OF LEEDS

# Fire Safety Design

Monday 13 – Friday 17 May 2024

**“The course offers a great overview of an introduction to fire engineering with some excellent speakers for a wide variety of subjects.”**



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## Course Director

Dr Roth Phylaktou, School of Chemical and Process Engineering, University of Leeds

## About the course

During this five-day short course, delegates will gain insights on key pieces of legislation along with methods for identification and quantification of hazard and risk as well the strategic approaches to fire safety design. The engineering design of specific fire safety systems such as: means of escape, detection and warning, emergency lighting, smoke control and fire extinguishing will be presented, and the main sources of more detailed information and guidance will be identified and reviewed. By necessity the course concentrates mainly on buildings; however, the principles presented are applicable to other systems. You'll also work through example calculations and design problems.

Depending on your training needs, you can either choose to attend the full five days or any individual day/s that are relevant to you. During day one, we will focus on means of escape, human behaviour in fires and look at the current UK and new EU testing standards. Day two will highlight detection and warning systems, as well as emergency lighting and structural protection. In day three, delegates will learn about smoke control systems including ventilation and pressurisation. Day four focuses on suppression installations using sprinkle and CO2 systems. Finally, day five will conclude with a review of several aspects of practical risk assessments in fire safety engineering.

## What our previous delegates say:

"The course is a must for anyone in the fire safety industry, the host lecturer has pulled together the very best in the industry."  
**Steve Taylor, HSE**

"The course offers a great overview of an introduction to fire engineering with some excellent speakers for a wide variety of subjects."  
**Bradley Goddard, University of Nottingham**

"Excellent course for Fire Safety Design, strategic approaches, key pieces of legislation and methods for identification and quantification of hazard and risk."  
**Andri Anastasiou, Cyprus Fire Service**

## Course aims

The course will give you a structured, organised, and comprehensive framework for fire safety and building fire protection design. On completion of the course, you should be able to make a significant contribution in the design of appropriate fire safety systems for a fairly complex building or structure.

A full copy of the Building Regulations, Approved Document B will also be provided if you attend the first day of the course.

## Who should attend

This course is for you if you've recently been given responsibility in fire safety and if you're looking for structured and comprehensive guidance on the fundamentals of fire safety design methods and approved practices. It will be of particular relevance if you're:

- an architect
- a building technologist
- a building surveyor
- a quantity surveyor
- a building control officer
- an estate manager
- a fire officer
- a loss adjuster
- a loss assessor
- an insurer
- a company fire safety officer
- a Health and Safety Executive staff member
- a fire consultant

Other fire related short courses:  
**Fire Dynamics and Modelling**

**Please note**, although we remain devoted to the programme specified, we reserve the right to vary the programme in detail if required to do so by factors beyond our control.

## Programme

### Monday 13 May 2024

#### Means of Escape / Human Behaviour in Fires / UK and New EU Testing Standards

08.30 Registration and coffee

#### 09.00 Welcome and Introduction

Dr Roth Phylaktou,  
University of Leeds

#### 09.10 Regulatory framework

Sally Friswell,  
Associate Director,  
Fire Engineering, Arup

10.05 Coffee

#### 10.20 Introduction to compartment fires

Dr Roth Phylaktou,  
University of Leeds

#### 12.00 Means of escape

Sally Friswell,  
Associate Director,  
Fire Engineering, Arup

13.00 Lunch

#### 13.50 Human behaviour in fire – basic principles, modelling and design

Professor David Purser,  
Hartford Environmental Research

15.35 Tea

#### 15.50 Travel time as an alternative to travel distance

James Gall,  
Fire Safety Engineer,  
Regent Fire Consultants

#### 16.35 Testing standards

Beth Dean,  
Maze Fire Consulting

17.20 End of day one

### Tuesday 14 May 2024

#### Detection and Warning Systems, Emergency Lighting and Structural Protection

08.45 Registration and coffee

#### 09.00 Detection and warning systems with case studies

Colin Newman,  
Healthfire Limited

10.15 Coffee

#### 10.30 Healthcare fire safety strategies

Colin Newman,  
Healthfire Limited

12.05 Lunch

#### 12.55 Aspects of passive fire protection in building design

David Wickham,  
International Paint

14.30 Tea

#### 14.45 Emergency lighting

Matt Fraser,  
P4 Fastel

#### 15.30 Alarm systems and sound level calculation

Dr Roth Phylaktou,  
University of Leeds

#### 16.15 Building design

Kevan Brelsford,  
Independent Fire Engineer

17.05 End of day two

18.30 Coach departs Weetwood Hall for course dinner

19.00 Course dinner

### Wednesday 15 May 2024

#### Smoke Control Systems (Ventilation and Pressurisation)

08.45 Registration and coffee

#### 09.00 The physics and hazards of smoke

Stewart Miles,  
Kiwa IFC Group

#### 09.25 Smoke control in fire safety design - engineering principles

Stewart Miles,  
Kiwa IFC Group

10.30 Coffee

#### 10.45 Smoke and heat exhaust ventilation (SHEVS) for single and multi-storey buildings

Conor Logan,  
Technical Director,  
Colt International Limited

#### 11.30 Application of pressure differential systems (PDS)

Conor Logan,  
Technical Director,  
Colt International Limited

#### 12.15 Alternative approaches

Stewart Miles,  
Kiwa IFC Group

13.00 Lunch

#### 14.00 Car parks and tunnels

Conor Logan,  
Technical Director,  
Colt International Limited

#### 14.45 Alternatives to staircase pressurisation

Dr Ryan McCreadie,  
OFR Consultants

15.45 Tea

#### 16.00 Comparison of hand and CFD predictions for simple smoke control systems and discussion on the important inputs and variables

Dr Roth Phylaktou,  
University of Leeds

17.00 End of day three

### Thursday 16 May 2024

#### Suppression installations – sprinkler and CO2 systems

08.45 Registration and coffee

#### 09.00 Automatic sprinkler protection systems

Allan Macpherson,  
FM Global

10.00 Coffee

#### 10.15 Automatic sprinkler protection systems (continued)

Allan Macpherson,  
FM Global

#### 11.45 Sprinkler system design calculations

Dr Roth Phylaktou,  
University of Leeds

12.30 Lunch

#### 13.20 Sprinkler system design calculations (continued)

#### 14.20 Carbon dioxide suppression systems

Dr Roth Phylaktou,  
University of Leeds

14.50 Tea

#### 15.05 Carbon dioxide suppression systems (continued)

#### 15.45 Developing technologies for fire suppression

Paul Galbraith,  
Consultant

17.05 End of day four

### Friday 17 May 2024

#### Fire Safety Engineering (Risk Assessment)

08.45 Registration and coffee

#### 09.00 Practical fire risk assessments

Joe Ruane,  
Fire Risk Management Associates

11.00 Coffee

#### 11.15 Risk assessment of external wall construction

David Crowder,  
DCCCH Experts LLP

12.20 Lunch

#### 13.00 Qualitative design review (QDR)

Dr Cristian Maluk,  
Semper Fire Engineering

14.00 Tea

#### 14.15 Quantitative fire risk assessment

Dr Cristian Maluk,  
Semper Fire Engineering

15.15 End of day five and course

<https://eps.leeds.ac.uk/short-courses>

## Further information

### Course Fees

Course fees cover tuition, course materials, lunches, and refreshments:

Full 5 days: **£1950**

Any 1 day: **£485**

### Venue

The course venue is Weetwood Hall Estate, located at Otley Road, Weetwood, Leeds LS16 5PS. For additional information, visit [www.weetwood.co.uk](http://www.weetwood.co.uk)

### Accommodation

If you require accommodation, and wish to stay at the course venue Weetwood Hall Estate please contact Emma Barker or Stevie Standerline E: [reservations@weetwood.co.uk](mailto:reservations@weetwood.co.uk) / T: 0113 230 6000 quoting 'CPD' and the 'Fire Safety Design' course.

Bedrooms are subject to availability with free of charge cancellation 48 hours prior to arrival:

Friday – Sunday – bed and breakfast **£93**

Monday – Thursday – bed and breakfast **£97**

Rates are per night for sole occupancy in a superior double room and inclusive of VAT.

### Course dinner

The course dinner will take place on Tuesday evening at a Leeds city centre restaurant and is included in the course fee. Transportation to/from Weetwood Hall is provided. The dress code is smart casual.

### How to Book

Please book your place through our secure Online store using debit or credit card following these steps:

1. Visit <http://store.leeds.ac.uk>
2. Select Conferences and Events > 'CPD Faculty of Engineering and Physical Sciences'
3. Choose your course, click 'Book Event,' and fill in your details.

### Accessibility

Please let us know if you have any specific requirements including any access or dietary requirements in relation to this course.


## Get in touch


**Harriet Wills** – Course Coordinator  
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University of Leeds

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E: [cpd@engineering.leeds.ac.uk](mailto:cpd@engineering.leeds.ac.uk)

W: <https://eps.leeds.ac.uk/short-courses>

 **CPD, Conference and Events Unit,  
University of Leeds**

 **@LeedsUniCPD**

## Terms and conditions for booking

### Payment

Payment by debit/credit card should be made at the time of booking via the Online Store. If for exceptional reasons you are unable to book and pay online a purchase order document will be required to support a manual booking process. Our standard payment terms are 30 days from date of invoice however payment must be made prior to attendance. Attendance may be refused if payment has not been received.

### Changes made by the University of Leeds

The course programme may have to be re-scheduled or the speakers changed for reasons outside our control. The University of Leeds reserves the right to cancel or postpone a course, in which case fees will be refunded in full. In the event of cancellation, the University will not be held liable for delegates' travel or accommodation expenses.

### Where a delegate cancels a registration

For cancellations made within seven days of booking: a full refund is payable unless the course starts within the next seven days, in which case the full fee is payable and no refunds will be made.

For cancellations made after seven days of booking: written cancellations received up to 15 working days before the course will be subject to an administrative charge of 20% of the total fee. Within 15 working days of the course the full fee is payable and no refunds will be made.

For non-attendance: the full fee is payable and no refunds will be made. Appropriate course materials will be sent to the registered delegate.

In the event of cancellation, the University will not be held liable for or refund any incurred travel or accommodation expenses. Substitutions may be made at any time.

### Data/Privacy

Your right to privacy is important to us. We will only use your information to provide information on our CPD courses and relevant events. We will not pass your details on to any other organisations. The ways in which your personal data may be used when you provide it to us are defined in our Privacy Notice at <https://eps.leeds.ac.uk/privacy>.

If you have opted in to receive details of future CPD courses from us you can unsubscribe at any time by emailing us at [cpd@engineering.leeds.ac.uk](mailto:cpd@engineering.leeds.ac.uk) and your details will be removed from our database.



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