



STRUCTURAL FIRE ENGINEERING COURSE

A seminar for engineers and built environment professionals covering the fundamental principles of designing buildings for fire safety

2 DAY CPD COURSE
Hybrid: Online and F2F

Sessions and Q&A
sessions

CPD course: 2 Points
Fee: R6 000



COURSE OBJECTIVE

The course covers the principles of structural design for fire safety.

- Fire safety in buildings
- Fires and heat
- Fire severity and resistance design of structures exposed to fire
- Steel structures in fire
- Concrete structures in fire
- Timber structures in fire
- Sustainable and innovative construction systems
- Fire safety for industrial systems

COURSE FOCAL POINTS

The course seeks to provide:

- How do real fires behave?
- What is the difference between a standard fire and a real fire?
- What is a 1-hour standard fire rating and how do I achieve it?
- What is structural failure?
- Understanding the limitation of current guidelines or codes of practice

Engineers, architects and built environment practitioners are regularly designing and constructing buildings which may either be unsafe in the case of a fire, or conversely could be safe, but be very uneconomical due to the specifications required for safety.



PRESENTERS



1. Prof Richard Walls

Richard Walls (PhD, MSc, GDE, BScEng, BTh, PrEng, FSAICE) is the head of the Fire Engineering Research Unit at Stellenbosch University (FireSUN). He worked as a professional structural engineer before becoming a lecturer and researcher. His areas of research include structural fire design, informal settlement fire safety, timber in fire, full-scale fire testing, modelling, structural steel and burning things down Myth Buster style. He has been involved in fire investigations and research in relation to R5bn worth of losses in SA, including various high-profile incidents. Prof Walls lectures on the design of steel and concrete structures, fire dynamics, structural fire design and supervises various masters and PhD students. He has contributed to publications by the World Bank and United Nations on developing world fire safety issues.



2. Dr Oscar Asumani

Oscar Asumani is a seasoned Professional Engineer, currently working for Sasol as a Principal Specialist Mechanical Engineer; leading a specialized multidisciplinary project team responsible for plant support works (e.g. conducting mechanical integrity and fire damage assessments of process equipment and infrastructures, Structural and mechanical design verifications, fitness-for-service, etc.); and for the procurement cycle of static equipment (e.g. design, fabrication, inspection and certification, etc.) including pressure vessels, Sasol reactors, heat exchangers, distillation column, process piping and pipeline systems. I also act as a Pipeline Integrity Expert; as well as a Specialist in composite materials (e.g. Structural design, fabrication and Inspection of Fibre reinforced Polymers). I have 25 years of experience within the process, petrochemical and mining industries; and 10 years of research experience in mechanical and process engineering integration.



3. Dr Natalia Flores Quiroz

Natalia Flores (PhD, MSc, BEng) is a senior lecturer in fire engineering at Stellenbosch University. She worked as a fire safety engineer designing active fire protection systems for the mining industry. She holds a M.Sc. in Fire Safety Engineering from Ghent University. Her areas of research include reconstruction of past incidents, wildland urban interface (WUI) fires. She teaches topics such as performance-based design, fire dynamics, human behaviour and evacuation, detection, and much more.



GENERAL

The seminar is accredited for 2 Continued Professional Development (CPD) credits with ECSA (Engineering Council of South Africa). Industry talks will be provided on topics including the design of façades for fire safety, timber structures, passive protection, and much more. A local fire lab will present the new suite of fire test standards for South Africa and how these influence the materials specified for buildings. Case studies from real-life structural failures and fire incidents will be presented to illustrate how to apply the concepts covered in the course.

CPD CREDITS

The seminar is accredited for 2 Continued Professional Development (CPD) credits with ECSA (Engineering Council of South Africa). **PLEASE NOTE: Only digital certificates are issued.**

REGISTRATION

Please register online by **[CLICKING HERE](#)**

PAYMENT

An invoice will be generated on successful registration. Payment details will be on the invoice.

Please email proof of payment to: **civilcourses@sun.ac.za**

CONTACT NUMBER: **021 808 2080**

PLEASE NOTE:

Payment is due before the course starts to confirm attendance and get access to online content.

WE LOOK FORWARD TO WELCOMING YOU AT THE COURSE!