

# POSTGRADUATE STUDIES IN FIRE SAFETY ENGINEERING

60 ECTS CREDITS - LANGUAGE: ENGLISH

## WHAT

The fire safety engineer understands and applies fire safety engineering (FSE). According to ISO TR 13387-1, fire safety engineering is the application of engineering principles, rules and expert judgement based on a scientific appreciation of the fire phenomena, of the effects of fire and of the reaction and behaviour of people, in order to:

- save life, protect property and preserve the environment and heritage;
- quantify the hazards and risk of fire and its effects;
- evaluate analytically the optimum protective and preventative measures necessary to limit, within prescribed levels, the consequences of fire.

These objectives will be achieved by a variety of means including activities such as:

- the assessment of the hazards and risks of fire and its effects;
- the mitigation of potential fire damage by proper design, construction, arrangement, and use of buildings, materials, structures, industrial processes, transportation systems and similar;
- determining the appropriate level of evaluation for the optimum preventive and protective measures necessary to limit the consequences of fire;
- the design, installation, maintenance and/or development of fire detection, fire suppression, fire control and fire related communication systems and equipment;
- the direction and control of appropriate equipment and manpower in the strategy and function of firefighting and rescue operations;
- post-fire investigation and analysis, evaluation and feedback.

A fire engineer, by education, training and experience:

- understands the nature and characteristics of fire and the mechanisms of fire spread and the control of fire and the associated products of combustion;
- understands how fires originate, spread within and outside buildings/structures, and can be detected, controlled, and/or extinguished;
- is able to anticipate the behaviour of materials, structures, machines, apparatus, and processes as related to the protection of life, property and the environment from fire;
- has an understanding of the interactions and integration of fire safety systems and all other systems in buildings, industrial structures and

similar facilities;

- is able to make use of all of the above and any other required knowledge to undertake the practice of fire engineering.

## STRUCTURE

This programme can be completed as a two-year part-time programme, with 30 credits per year (in total four times twelve weeks). However, participants can decide to spread the completion of the programme over more than 2 years as well. The mandatory courses mainly take place in the afternoon and on Fridays. This allows professionals to participate. The programme consists of 11 general courses, an elective course and a dissertation.

## LABOUR MARKET

Fire safety consultants, fire prevention officers, fire brigade officers, building designers, building services engineers, architectural practitioners.

# POSTGRADUATE STUDIES IN FIRE SAFETY ENGINEERING

60 ECTS CREDITS - LANGUAGE: ENGLISH

## TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

### 1 Rechtstreeks:

- a opleidingen nieuwe structuur:
- Master in de ingenieurswetenschappen: architectuur
  - Master in de ingenieurswetenschappen: bouwkunde
  - Master in de ingenieurswetenschappen: chemische technologie
  - Master in de ingenieurswetenschappen: elektrotechniek
  - Master in de ingenieurswetenschappen: materiaalkunde
  - Master in de ingenieurswetenschappen: toegepaste natuurkunde
  - Master in de ingenieurswetenschappen: werktuigkunde-elektrotechniek
  - Master of Chemical Engineering
  - Master of Civil Engineering
  - Master of Electrical Engineering
  - Master of Electromechanical Engineering
  - Master of Engineering Physics
  - Master of Sustainable Materials Engineering
  - Master of Textile Engineering
- b opleidingen oude structuur:
- Burgerlijk bouwkundig ingenieur
  - Burgerlijk elektrotechnisch ingenieur
  - Burgerlijk ingenieur-architect
  - Burgerlijk materiaalkundig ingenieur
  - Burgerlijk natuurkundig ingenieur
  - Burgerlijk scheikundig ingenieur
  - Burgerlijk textielingenieur
  - Burgerlijk werktuigkundig-elektrotechnisch ingenieur

### 2 Na onderzoek van de bekwaamheid van de student om de opleiding te volgen:

- a opleidingen nieuwe structuur:
- Een diploma van een opleiding 'Master of Science in de bio-ingenieurswetenschappen' leidend tot de titel van 'bio-ingenieur'
  - Een diploma van een opleiding 'Master of Science in de industriële wetenschappen'
  - Een diploma van een opleiding 'Master of Science in de ingenieurswetenschappen' leidend tot de titel van 'burgerlijk ingenieur' (met uitzondering van architectuur)
  - Een diploma van een opleiding 'Master of Science in Engineering' leidend tot de titel van 'burgerlijk ingenieur' (met uitzondering van Architecture)
  - Master in de architectuur

- Master of Architectural Engineering
- b opleidingen oude structuur:
  - Architect
  - Een diploma van 'Burgerlijk Ingenieur' (met uitzondering van 'Burgerlijk Ingenieur-Architect')
  - Een diploma van 'Industrieel Ingenieur'

## ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Bachelors or Masters in: architecture, civil engineering, electrical engineering, electromechanical engineering, chemical engineering, engineering physics, materials science, industrial engineering and operations research, urbanism and spatial planning.

Other degrees on the basis of a study of individual skills (e.g. fire safety consultants, fire prevention officers, fire brigade officers, building designers, building services engineers, architectural practitioners).

Information on admission requirements and the administrative procedure for admission on the basis of a diploma obtained abroad, can be found on the following page: [www.ugent.be/prospect/en/administration/enrolment-or-registration](http://www.ugent.be/prospect/en/administration/enrolment-or-registration).

## LANGUAGE REQUIREMENTS

Language requirements Dutch: no language requirements  
English: CEFR level B2

## PRACTICAL INFORMATION

### Study programme

[studiekiezer.ugent.be/postgraduate-studies-in-fire-safety-engineering-en/programma](http://studiekiezer.ugent.be/postgraduate-studies-in-fire-safety-engineering-en/programma)

### Information sessions

#### Graduation Fair

[afstudeerbeurs.gent/en/students/further-studies](http://afstudeerbeurs.gent/en/students/further-studies)

# POSTGRADUATE STUDIES IN FIRE SAFETY ENGINEERING

60 ECTS CREDITS - LANGUAGE: ENGLISH

## Enrolling institution

Information on enrolment at Ghent University.

## Application Deadline (for International degree students)

Before the application can be started up, you need to be pre-academically selected by the programme coordinator.

## Tuition fee

More information is to be found on: [www.ugent.be/tuitionfee](http://www.ugent.be/tuitionfee)

## Contact

Ruben Van Coile  
[mfse@ugent.be](mailto:mfse@ugent.be)

## Contact (for international degree students)

International Relations Officer  
+32 9 264 36 99  
[international.ea@ugent.be](mailto:international.ea@ugent.be)