

# INTERNATIONAL MASTER OF SCIENCE IN FIRE SAFETY ENGINEERING

Erasmus+ Master's Programme jointly organised by Ghent University (Belgium, co-ordinator), The University of Edinburgh (UK) and Lund University (Sweden) - Associated consortium partners are ETH Zürich (Switzerland), University of Queensland (Australia) and The University of Maryland (USA).

120 ECTS CREDITS – FULL-TIME – LANGUAGE: ENGLISH – DEGREE: JOINT MASTER OF SCIENCE

## COURSE CONTENT

The Master of Science is an ideal specialization programme for holders of a bachelor's or master's degree in (electro-)mechanical or civil engineering. There is a strong European tendency to move from prescriptive towards performance-based fire safety designs. This goes hand in hand with a strong need for advanced knowledge in the multidisciplinary field of Fire Safety Engineering (FSE). The students will be well prepared for professional activities within this evolving field of FSE, as they will obtain a broad high level knowledge as a benefit from the joint expertise of three partners all of which have a leading role in FSE research and education in Europe.

The IMFSE students will learn how to:

- master the scientific knowledge to understand, critically evaluate and analyse the phenomenon fire and its consequences;
- critically evaluate and judge risk with respect to fire and explosions;
- compute and design different types of fire protection concerning structures, passive fire protection, detection and suppression;
- judge the human behaviour in case of fire;
- communicate and collaborate with colleagues within the multidisciplinary domain of Fire Safety Engineering.

## COURSE STRUCTURE

The two-year course consists of four semesters of 30 credits each. The mobility structure, with possible change in study location after each semester, gives the students the opportunity to gain from the strengths and expertise of each of the three universities. The first semester, covering basic topics in fire safety engineering, is taught in Ghent or Edinburgh.

All students spend the second semester in Lund, with emphasis on enclosure fire dynamics, risk analysis and human behaviour. The third semester is again taught in Ghent (for general FSE) or Edinburgh (with focus on fire and structures engineering in the context of FSE). The fourth semester is devoted to the master's dissertation, hosted by one or more of the six universities (three partners and the three associated consortium partners).

### > Master's dissertation

The master's dissertation is a requirement for every candidate to obtain a master's degree and is supervised by at least one of the three partner universities. It consists of a critical analysis of the topic, formulated into an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student defines his/her own topic or selects one from a topic list.

## CAREER PERSPECTIVES

The masters can find a job as fire safety engineer:

- in fire protection consultancy companies;
- in design bureaus for structural stability and/or technical equipment of buildings;
- in architect bureaus;
- in fire prevention services of larger cities;
- as responsible person for fire prevention in industry;
- in prevention departments of fire brigades;
- in fire protection equipment industry;
- as fire experts in insurance companies;
- as fire experts in governmental agencies;
- in standard testing laboratories;
- in environmental impact assessment consultancies;
- in health and safety organisations;
- in research and education institutes.

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## TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

### Rechtstreeks:

- Ba ingenieurswetenschappen (alle, incl. Ba architectuur)

### Na geschiktheidsonderzoek:

- (ander) diploma van bachelor

### TAAL

Je moet een taalbewijs Engels voorleggen. Zie ook:  
[www.imfse.ugent.be](http://www.imfse.ugent.be)

## PRAKTISCHE INFORMATIE

### Studieprogramma:

<https://studiegids.ugent.be>

> faculteiten > opleidingstypes > ga naar de opleiding van je keuze

### Alternatieve trajecten

Meer informatie over voorbereidings- en brugprogramma's op  
[www.ugent.be/ea](http://www.ugent.be/ea)

volg > alles voor toekomstige studenten > voor wie al een diploma heeft

### Infomomenten

#### Masterbeurs

[www.ugent.be/masterbeurs](http://www.ugent.be/masterbeurs)

#### Infosessie

22 april 2020 - 17 u.-19 u. doorlopend, Campus Ufo, Ufo,  
Sint-Pietersnieuwstraat 33 - Foyer

[www.ugent.be/nl/studeren/masteropleidingen](http://www.ugent.be/nl/studeren/masteropleidingen)

### Contact

Universiteit Gent – Faculteit Ingenieurswetenschappen en  
Architectuur – Opleidingscommissie Fire Safety Engineering  
Prof. Bart Merci

Campus Ufo, Sint-Pietersnieuwstraat 41, 9000 Gent

T 09 264 33 14 – [imfse@ugent.be](mailto:imfse@ugent.be)

[www.imfse.ugent.be](http://www.imfse.ugent.be)

### Meer info

Afdeling Studieadvies – Campus Ufo, Ufo,

Sint-Pietersnieuwstraat 33, 9000 Gent, T 09 331 00 31

[studieadvies@ugent.be](mailto:studieadvies@ugent.be) – [www.ugent.be/studieadvies](http://www.ugent.be/studieadvies)

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## ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Bachelors or Masters in: architecture, civil engineering, electrical engineering, electromechanical engineering, chemical engineering, engineering physics, materials science, 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).

### LANGUAGE

More information regarding the required knowledge of English:  
[www.ugent.be/languagerequirements](http://www.ugent.be/languagerequirements)  
See also: [www.imfse.ugent.be](http://www.imfse.ugent.be)

## PRACTICAL INFORMATION

### Study programme

[www.ugent.be/coursecatalogue](http://www.ugent.be/coursecatalogue)

> by Faculty > Programme types > select your programme

### Application deadline

The Erasmus+ master's programmes have a specific application procedure to be started up via the specific website.

[www.imfse.ugent.be](http://www.imfse.ugent.be)

### Enrolling institution

Ghent University

### Tuition fee

- Separate amounts and procedures apply.
- Tuition fee reductions and scholarships are available and awarded on a competitive basis.
- Application for enrolment and scholarships or tuition fee reductions is directly through the secretariat of the programme: [www.imfse.ugent.be](http://www.imfse.ugent.be). For programme specific information, please contact the programmes directly: [imfse@ugent.be](mailto:imfse@ugent.be)

### Contact

Faculty of Engineering and Architecture  
International Relations Officer – Degree students  
Annelies Vermeir – [annelies.vermeir@ugent.be](mailto:annelies.vermeir@ugent.be)  
T +32 9 264 36 99 – [internationalplateau.ea@ugent.be](mailto:internationalplateau.ea@ugent.be)

Last update: January 2020.