GHENT UNIVERSITY

Study Programme

Academic year 2021-2022

Programme jointly offered by Ghent University,Lund University,The University of Edinburgh

International Master of Science in Fire Safety Engineering

Language of instruction: English

Programme version 11

1 General Courses — 90 credits

Subscribe to 90 credit units from no less than 2 and no more than 3 modules from the following list. Subject to approval by the faculty.
In accordance with the mobility scheme of the student.

1.1 General Courses Ghent University

Subscribe to no less than 30 and no more than 60 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E051540	Explosions and Industrial Fire Safety *Filip Verplaetsen -- Department of Structural Engineering and Building Materials*	6		1	A:1	180
2	E051430	Fire Dynamics *Tarek Beji -- Department of Structural Engineering and Building Materials*	6		1	B:1	180
3	E051581	Fire Research Seminar *Bart Merci -- Department of Structural Engineering and Building Materials*	3		1	A:1	90
4	E039161	Thermodynamics, Heat and Mass Transfer *Georgios Maragkos -- Department of Structural Engineering and Building Materials*	6		1	A:1	180
5	E051570	Material Behaviour at Ambient and Elevated Temperatures *Bart Merci -- Department of Structural Engineering and Building Materials*	3		1	A:1	90
6	E051482	Active Fire Protection I: Detection and Suppression *Christian Gryspeert -- Department of Structural Engineering and Building Materials*	6		2	A:1	180
7	E051494	Active Fire Protection II: Smoke and Heat Control *Bart Merci -- Department of Structural Engineering and Building Materials*	6		2	A:1	180
8	E051443	Fire Safety and Legislation *Jan De Saedeleer -- Department of Structural Engineering and Building Materials*	3		2	A:1	90
9	E051610	Passive Fire Protection *Emmanuel Annerel -- Department of Structural Engineering and Building Materials*	3		2	A:1	90
10	E061522	Performance-Based Design *Patrick van Hees -- Department of Structural Engineering and Building Materials*	6		2	A:1	180

1.1.1 In-depth Structural Engineering Elective Courses Ghent University

Subscribe to no less than 3 and no more than 9 credit units from the following list. Subject to approval by the faculty.
Each student takes the course Design for Structural Fire Resistance (E051512), either in year 1 or in year 2.
Students without the prerequisite structural/civil engineering background take Analysis of Structures (E051511) in year 1 and Design for Structural Fire Resistance (E051512) in year 2. They can also choose Applications of Advanced Structural Fire Engineering (E051620) as an extra elective in year 2.
Students with the necessary initial competences choose Design for Structural Fire Resistance (E051512) in year 1 and subscribe to Applications of Advanced Structural Fire Engineering (E051620) in year 2.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E051511	Analysis of Structures *Ruben Van Coile -- Department of Structural Engineering and Building Materials*	3		1	A:1	90
2	E051512	Design for Structural Fire Resistance *Emmanuel Annerel -- Department of Structural Engineering and Building Materials*	3			A:1	90
3	E051620	Applications of Advanced Structural Fire Engineering *Ruben Van Coile -- Department of Structural Engineering and Building Materials*	3		2	A:1	90

1.1.2 Broadening Elective Courses Ghent University

Subscribe to no more than 3 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E076431	Introduction to Entrepreneurship *Petra Andries -- Department of Marketing, Innovation and Organisation*	3			A:1	90
2	E037321	Turbomachines *Joris Degroote -- Department of Electromechanical, Systems and Metal Engineering*	6			B:1	180
3	E045930	Modelling of Turbulence and Combustion *Bart Merci -- Department of Structural Engineering and Building Materials*	3			A:1	90
4	E051700	CFD for Fire Safety Engineering *Tarek Beji -- Department of Structural Engineering and Building Materials*	3			A:1	90
5	E051560	FSE Based Firefighting *Karel Lambert -- Department of Structural Engineering and Building Materials*	3			A:1	90
6	E051640	Data-Driven Management of Fire Incidents *Steven Verstockt -- Department of Electronics and Information Systems*	3			A:1	90

1.2 General Courses The University of Edinburgh 60 credits

Subscribe to no less than 30 and no more than 60 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E900527	Fire Science and Fire Dynamics *Ricky Carvel -- The University of Edinburgh*	9		1	A:1	270
2	E900529	Fire Safety Engineering *Stephen Welch -- The University of Edinburgh*	9		1	A:1	270
3	E900530	Research Methods for Engineers *Antonis Giannopoulos -- The University of Edinburgh*	6		1	A:1	180
4	E900528	Structural Mechanics *Luke Bisby -- The University of Edinburgh*	6		1	A:1	180
5	E900524	Finite Element Analysis for Solids *Pankaj Pankaj -- The University of Edinburgh*	6		2	A:1	180
6	E900531	Fire Science Laboratory *Stephen Welch -- The University of Edinburgh*	6		2	A:1	180
7	E900532	Fire Investigation and Failure Analysis *Rory Hadden -- The University of Edinburgh*	6		2	A:1	180
8	E900522	Structural Design for Fire *Angus Law -- The University of Edinburgh*	6		2	A:1	180
9	E900533	Fire Safety, Engineering and Society *Graham Spinardi -- The University of Edinburgh*	6		2	A:1	180

1.3 General Courses Lund University 30 credits

Subscribe to 30 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E900304	Risk Assessment *Håkan Frantzich -- Lund University*	8		1	A:2	240
2	E900305	Advanced Fire Dynamics *Nils Johansson -- Lund University*	9		1	A:2	270
3	E900306	Human Behaviour in Fire *Enrico Ronchi -- Lund University*	8		1	A:2	240
4	E900525	Simulation of Fires in Enclosures *Jonathan Wahlqvist -- Lund University*	5		1	A:2	150

2 Master's Dissertation 30 credits

Subscribe to 30 credit units from the following list. Subject to approval by the faculty.
The student can take the Master's Dissertation at one of the partner universities, in accordance with his/her mobility scheme.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E091105	Master's Dissertation	30		2	B:2	900

Teaching

When a course is not taught (solely) in the programme's language of instruction, the effectively used languages are indicated in square brackets following the cours name, using the following ISO codes:

bg: Bulgarian	de: German	es: Spanish	ja: Japanese	pl: Polish	sh: Kroatian/Serbian	zh: Chinese
cs: Czech	el: Greek	fr: French	nl: Dutch	pt: Portuguese	sl: Slovene	
da: Danish	en: English	it: Italian	no: Norwegian	ru: Russian	sv: Swedish	

Semester

Semesters are indicated by their number (1 or 2); semester 3 represents the summer period and J indicates a course spanning semesters 1 and 2.
When a capital letter precedes a semester number, the course has multiple offerings. The letter indicates the offering concerned.
When a semester is shown in brackets, the course in not offered this year in the specific offering.
The offering frequency and first year of offering are indicated by the following codes:

a: bi-annually	c: annually, from 2022-2023	f: annually, from 2023-2024	i: annually, from 2024-2025
b: tri-annually	d: bi-annually, from 2022-2023	g: bi-annually, from 2023-2024	j: bi-annually, from 2024-2025
	e: tri-annually, from 2022-2023	h: tri-annually, from 2023-2024	k: tri-annually, from 2024-2025