

Faculty of Engineering and Architecture

Master of Science in Fire Safety Engineering

Language of instruction: English

Programme version 8

## 1 General Courses 81 credits

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	E051640 Data-Driven Management of Fire Incidents Steven Verstockt -- Department of Electronics and Information Systems	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	E051461 Interaction between People and Fire Edwin Galea -- Department of Structural Engineering and Building Materials	6		1	A:2	180
7	E051550 Risk Management Robby Caspeele -- Department of Structural Engineering and Building Materials	6		1	A:2	180
8	E051590 Compartmentation Strategies David Maeso Asua -- Department of Structural Engineering and Building Materials	3		1	A:2	90
9	E051600 Structural Fire Engineering Thomas Thienpont -- Department of Structural Engineering and Building Materials	6		1	A:2	180
10	E051421 Fluid Mechanics Applications in Fire Tom De Mulder -- Department of Civil Engineering	6		1	A:2	180
11	E051700 CFD for Fire Safety Engineering Tarek Beji -- Department of Structural Engineering and Building Materials	3		1	A:2	90
12	E051482 Active Fire Protection I: Detection and Suppression Christian Gryspeerdt -- Department of Structural Engineering and Building Materials	6		2	A:1	180
13	E051494 Active Fire Protection II: Smoke and Heat Control Bart Merci -- Department of Structural Engineering and Building Materials	6		2	A:1	180
14	E051443 Fire Safety and Legislation Jan De Saedeleer -- Department of Structural Engineering and Building Materials	3		2	A:1	90
15	E051610 Passive Fire Protection Emmanuel Annerel -- Department of Structural Engineering and Building Materials	3		2	A:1	90
16	E061522 Performance-Based Design Patrick van Hees -- Department of Structural Engineering and Building Materials	6		2	A:1	180
17	E051630 Fire Safety Strategy Project David Maeso Asua -- Department of Structural Engineering and Building Materials	3		2	A:2	90

## 2 Elective Courses

Subscribe to no less than 6 and no more than 9 credit units from the following list. Subject to approval by the faculty.

- All students take Design for Structural Fire Resistance (E051512), either in year 1 or in year 2.
- Students without the prerequisite structural/civil engineering background:
  - Subscribe to Analysis of Structures (E051511) in year 1
  - Subscribe to Design for Structural Fire Resistance (E051512) in year 2
  - May choose Applications of Advanced Structural Fire Engineering (E051620) as an extra elective in year 2.
- Students with the necessary initial competences:
  - Subscribe to Design for Structural Fire Resistance (E051512) in year 1
  - Subscribe to Applications of Advanced Structural Fire Engineering (E051620) in year 2

## 2.1 Elective Course Design

Subscribe to 3 credit units from the following list. Subject to approval by the faculty.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E051512 Design for Structural Fire Resistance Emmanuel Annerel -- Department of Structural Engineering and Building Materials	3			A:1	90

## 2.2 Elective Course Structures

Subscribe to no less than 3 and no more than 6 credit units from the following list. Subject to approval by the faculty.

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	E051620 Applications of Advanced Structural Fire Engineering Ruben Van Coile -- Department of Structural Engineering and Building Materials	3		2	A:1	90

## 3 Elective Courses

Subscribe to no less than 6 and no more than 9 credit units from no less than 1 and no more than 3 modules from the following list. Subject to approval by the faculty.

### 3.1 Elective Courses Fire Safety Engineering

Subscribe to no more than 9 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 Alexander Snegirev -- Department of Structural Engineering and Building Materials	3			A:1	90
4	E051560 FSE Based Firefighting Karel Lambert -- Department of Structural Engineering and Building Materials	3			B:1	90
5	E051581 Fire Research Seminar Bart Merci -- Department of Structural Engineering and Building Materials	3			A:1	90
6	E099400 Research Internship Patrick Segers -- Department of Electronics and Information Systems	6			A:J	180
7	E099400 Research Internship Patrick Segers -- Department of Electronics and Information Systems	3			B:J	90

### 3.2 Elective Social Courses

Subscribe to 6 credit units from the following list. Subject to approval by the faculty.

Students may apply for another elective social course, given a clear motivation and after approval by the faculty (exceptionally, as a rule a course from the list below is followed).

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E099300 Industry Internship Engineering and Architecture [en, nl] Patrick Segers -- Department of Electronics and Information Systems	6			A:J	180
2	E098010 Integrated Portfolio [en, nl] Hiep Luong -- Department of Telecommunications and Information Processing	6			A:J	180
3	E098010 Integrated Portfolio [en, nl] Hiep Luong -- Department of Telecommunications and Information Processing	3			B:J	90
4	E037810 Safety of Electrical and Mechanical Installations [nl] Jos Knockaert -- Department of Electromechanical, Systems and Metal Engineering	3			A:2	90
5	E039060 Sustainable Energy and Rational Use of Energy Jeroen Beeckman -- Department of Electronics and Information Systems	4			A:2	120
6	E078310 Sustainable Use of Materials: Metals [nl] Kim Verbeken -- Department of Materials, Textiles and Chemical Engineering	3			A:1	90
7	E078320 Sustainable Use of Materials: Plastics and Derived Materials [nl] Lode Daelemans -- Department of Materials, Textiles and Chemical Engineering	3			A:2	90
8	E078010 Technology and Environment Luc Martens -- Department of Information Technology	3			A:1	90
9	E078752 Water and Air Quality Management Joris Thybaut -- Department of Materials, Textiles and Chemical Engineering	4			A:2	120
10	E092100 Biosystems [nl] Pascal Verdonck -- Department of Electronics and Information Systems	3			A:1	90

11	E075310	Ethics, Engineering and Society [nl] Seppe Segers -- Department of Philosophy and Moral Sciences	3		A:2	90
12	C004009	History and Philosophy of Sciences [nl] Maarten Van Dyck -- Department of Philosophy and Moral Sciences	3		A:1	90
13	E076320	The Information Society and ICT [nl] Erik Mannens -- Department of Electronics and Information Systems	3		A:2	90
14	A001900	Introduction to Psychology [nl] Wim Notebaert -- Department of Experimental Psychology	3		A:1	90
15	H001977	Coaching and Diversity [nl] Elisabeth De Schauwer -- Department of Special Education	3	UKV	A:J	90
16	A005503	Context and Nuance. A Critical Reflection on Current Topics [nl] Stef Craps -- Department of Literary Studies	6	UKV	A:1	180
17	E076450	Basic Entrepreneurship [nl]	3	UKV	A:1	90
18	A005646	Introduction to Corporate Law [nl] Diederik Bruloot -- Department of Interdisciplinary Study of Law, Private Law and Business Law	3		A:1	90
19	E076460	Dare to Venture Johan Verrue -- Department of Marketing, Innovation and Organisation	4		A:2	120
20	E076471	Dare to Start Frank Gielen -- Department of Information Technology	3		A:2	90
21	E076621	Principles of Law and Construction Law [nl] Jelle Laverge -- Department of Architecture and Urban Planning	3		A:1	90
22	E076951	Engineering Economy Sofie Verbrugge -- Department of Information Technology	6		A:1	180
23	E076431	Introduction to Entrepreneurship Petra Andries -- Department of Marketing, Innovation and Organisation	3		A:1	90
24	H002169	Powerful Learning Environments [nl] Bram De Wever -- Department of Educational Studies	6		A:1	180
25	H002196	Classroom Management and Reflection [nl] Melissa Tuytens -- Department of Educational Studies	4		A:2	120
26	H002197	The Teacher within School and Society [nl] Melissa Tuytens -- Department of Educational Studies	4		A:1	120
27	H002198	Psychology of Adolescence [nl] Wim Beyers -- Department of Developmental, Personality and Social Psychology	4		A:1	120
28	F000083	Macroeconomics [nl] Freddy Heylen -- Department of Economics	6		A:1	180
29	H001010	Introduction Industrial Psychology [nl] Bart Wille -- Department of Developmental, Personality and Social Psychology	5		A:2	150
30	F000551	Business Skills Mieke Audenaert -- Department of Marketing, Innovation and Organisation	4		C:2	120
31	A003001	Academic English Geert Jacobs -- Department of Linguistics	3	UKV	B:1, A:2	90
32	E075800	Communication [nl] Leen Pollefliet -- Department of Information Technology	3		A:1	90

### 3.3 Elective Courses Ghent University

Subscribe to no more than 6 credit units from the programmes of Ghent University, including the [Ghent University Elective Courses](#).  
Subject to approval by the faculty.

## 4 Master's Dissertation 24 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E091103 Master's Dissertation	24		2	B:J	720

#### 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 course name, using the following ISO codes:

bg: Bulgarian	de: German	es: Spanish	ja: Japanese	pl: Polish	sh: Croatian/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 is 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 2025-2026	f: annually, from 2026-2027	i: annually, from 2027-2028
b: tri-annually	d: bi-annually, from 2025-2026	g: bi-annually, from 2026-2027	j: bi-annually, from 2027-2028
	e: tri-annually, from 2025-2026	h: tri-annually, from 2026-2027	k: tri-annually, from 2027-2028