

Faculty of Engineering and Architecture

Master of Science in Fire Safety Engineering

Language of instruction: English

Programme version 9

## 1 General Courses 81 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E051540 Explosions and Industrial Fire Safety <i>Filip Verplaetsen -- Department of Structural Engineering and Building Materials</i>	6		1	A:1	180
2	E051430 Fire Dynamics <i>Tarek Beji -- Department of Structural Engineering and Building Materials</i>	6		1	B:1	180
3	E051640 Data-Driven Management of Fire Incidents <i>Steven Verstockt -- Department of Electronics and Information Systems</i>	3		1	A:1	90
4	E039161 Thermodynamics, Heat and Mass Transfer <i>Georgios Maragkos -- Department of Structural Engineering and Building Materials</i>	6		1	A:1	180
5	E051570 Material Behaviour at Ambient and Elevated Temperatures <i>Bart Merci -- Department of Structural Engineering and Building Materials</i>	3		1	A:1	90
6	E051461 Interaction between People and Fire <i>Enrico Ronchi -- Department of Structural Engineering and Building Materials</i>	6		1	A:2	180
7	E051550 Risk Management <i>Ruben Van Coile -- Department of Structural Engineering and Building Materials</i>	6		1	A:2	180
8	E051590 Compartmentation Strategies <i>David Maeso Asua -- Department of Structural Engineering and Building Materials</i>	3		1	A:2	90
9	E051600 Structural Fire Engineering <i>Thomas Thienpont -- Department of Structural Engineering and Building Materials</i>	6		1	A:2	180
10	E051421 Fluid Mechanics Applications in Fire <i>Tom De Mulder -- Department of Civil Engineering</i>	6		1	A:2	180
11	E051700 CFD for Fire Safety Engineering <i>Tarek Beji -- Department of Structural Engineering and Building Materials</i>	3		1	A:2	90
12	E051482 Active Fire Protection I: Detection and Suppression <i>Christian Gryspeert -- Department of Structural Engineering and Building Materials</i>	6		2	A:1	180
13	E051494 Active Fire Protection II: Smoke and Heat Control <i>Bart Merci -- Department of Structural Engineering and Building Materials</i>	6		2	A:1	180
14	E051443 Fire Safety and Legislation <i>Jan De Saedeleer -- Department of Structural Engineering and Building Materials</i>	3		2	A:1	90
15	E051610 Passive Fire Protection <i>Emmanuel Annerel -- Department of Structural Engineering and Building Materials</i>	3		2	A:1	90
16	E061522 Performance-Based Design <i>Patrick van Hees -- Department of Structural Engineering and Building Materials</i>	6		2	A:1	180
17	E051630 Fire Safety Strategy Project <i>David Maeso Asua -- Department of Structural Engineering and Building Materials</i>	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:
  - Ssubscribe 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 <i>Emmanuel Annerel -- Department of Structural Engineering and Building Materials</i>	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 <i>Andrea Franchini -- Department of Structural Engineering and Building Materials</i>	3		1	A:1	90
2	E051620 Applications of Advanced Structural Fire Engineering <i>Ruben Van Coile -- Department of Structural Engineering and Building Materials</i>	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	F001020 Introduction to Entrepreneurship <i>Petra Andries -- Department of Marketing, Innovation and Organisation</i>	3			A:1	90
2	E048100 Fluid Machines <i>Joris Degroote -- Department of Electromechanical, Systems and Metal Engineering</i>	6			A:1	180
3	E045930 Modelling of Turbulence and Combustion <i>Alexander Snegirev -- Department of Structural Engineering and Building Materials</i>	3			A:1	90
4	E051560 FSE Based Firefighting <i>Karel Lambert -- Department of Structural Engineering and Building Materials</i>	3			B:1	90
5	E051581 Fire Research Seminar <i>Bart Merci -- Department of Structural Engineering and Building Materials</i>	3			A:1	90
6	E099400 Research Internship <i>Patrick Segers -- Department of Electronics and Information Systems</i>	6			A:J	180
7	E099400 Research Internship <i>Patrick Segers -- Department of Electronics and Information Systems</i>	3			B:J	90

### 3.2 Elective Social Courses

[Subscribe to no less than 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] <i>Patrick Segers -- Department of Electronics and Information Systems</i>	6			A:J	180
2	E098010 Integrated Portfolio [en, nl] <i>Hiep Luong -- Department of Telecommunications and Information Processing</i>	6			A:J	180
3	E098010 Integrated Portfolio [en, nl] <i>Hiep Luong -- Department of Telecommunications and Information Processing</i>	3			B:J	90
4	E037810 Safety of Electrical and Mechanical Installations [nl] <i>Jos Knockaert -- Department of Electromechanical, Systems and Metal Engineering</i>	3			A:2	90
5	E039060 Sustainable Energy and Rational Use of Energy <i>Filip Strubbe -- Department of Electronics and Information Systems</i>	4			A:2	120
6	E078310 Sustainable Use of Materials: Metals [nl] <i>Kim Verbeken -- Department of Materials, Textiles and Chemical Engineering</i>	3			A:1	90
7	E078320 Sustainable Use of Materials: Plastics and Derived Materials [nl] <i>Lode Daelemans -- Department of Materials, Textiles and Chemical Engineering</i>	3			A:2	90
8	E078010 Technology and Environment <i>Luc Martens -- Department of Information Technology</i>	3			A:1	90
9	E078752 Water and Air Quality Management <i>Joris Thybaut -- Department of Materials, Textiles and Chemical Engineering</i>	4			A:2	120

10	E092100	Biosystems [nl] <i>Pascal Verdonck -- Department of Electronics and Information Systems</i>	3		A:1	90
11	E075310	Ethics, Engineering and Society [nl] <i>Seppe Segers -- Department of Philosophy and Moral Sciences</i>	3		A:2	90
12	C004009	History and Philosophy of Sciences [nl] <i>Maarten Van Dyck -- Department of Philosophy and Moral Sciences</i>	3		B:2	90
13	E076320	The Information Society and ICT [nl] <i>Erik Mannens -- Department of Electronics and Information Systems</i>	3		A:2	90
14	A001900	Introduction to Psychology [nl] <i>Wim Notebaert -- Department of Experimental Psychology</i>	3		A:1	90
15	H001977	Coaching and Diversity [nl] <i>Elisabeth De Schauwer -- Department of Special Education</i>	3	UKV	A:J	90
16	A005503	Context and Nuance. A Critical Reflection on Current Topics [nl] <i>July De Wilde -- Department of Translation, Interpreting and Communication</i>	6	UKV	A:1	180
17	F001021	Basic Entrepreneurship [nl] <i>Evy Van Lancker -- Department of Marketing, Innovation and Organisation</i>	3	UKV	A:1	90
18	A005646	Introduction to Business Law [nl] <i>Diederik Bruloot -- Department of Interdisciplinary Study of Law, Private Law and Business Law</i>	3		A:1	90
19	F001022	Dare to Venture <i>Johan Verrue -- Department of Marketing, Innovation and Organisation</i>	4		A:2	120
20	E076471	Dare to Start <i>Wouter Haerick -- Department of Information Technology</i>	3		A:2	90
21	E076621	Principles of Law and Construction Law [nl] <i>Jelle Laverge -- Department of Architecture and Urban Planning</i>	3		A:1	90
22	E076951	Engineering Economy <i>Sofie Verbrugge -- Department of Industrial Systems Engineering and Product Design</i>	6		A:1	180
23	F001020	Introduction to Entrepreneurship <i>Petra Andries -- Department of Marketing, Innovation and Organisation</i>	3		A:1	90
24	H002476	Powerful Learning Environments [nl] <i>Bram De Wever -- Department of Educational Studies</i>	6		A:1	180
25	H002477	The Teacher within Class, School and Society [nl] <i>Melissa Tuytens -- Department of Educational Studies</i>	6		A:2	180
26	H002478	The Student: Development and Motivation [nl] <i>Wim Beyers -- Department of Developmental, Personality and Social Psychology</i>	6		A:1	180
27	F000083	Macroeconomics [nl] <i>Freddy Heylen -- Department of Economics</i>	6		A:1	180
28	H001010	Introduction Industrial Psychology [nl] <i>Bart Wille -- Department of Developmental, Personality and Social Psychology</i>	5		C:1	150
29	F000551	Business Skills <i>Mieke Audenaert -- Department of Marketing, Innovation and Organisation</i>	4		C:2	120
30	A003001	Academic English <i>Geert Jacobs -- Department of Linguistics</i>	3	UKV	B:1, A:2	90
31	E075800	Communication [nl] <i>Leen Pollefliet -- Department of Information Technology</i>	3		A:1	90
32	E037830	Basics of Health and Safety at Work for Engineers [nl] <i>Sofie Van Volssem -- Department of Industrial Systems Engineering and Product Design</i>	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 2026-2027	f: annually, from 2027-2028	i: annually, from 2028-2029
b: tri-annually	d: bi-annually, from 2026-2027	g: bi-annually, from 2027-2028	j: bi-annually, from 2028-2029
	e: tri-annually, from 2026-2027	h: tri-annually, from 2027-2028	k: tri-annually, from 2028-2029