

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 <i>Filip Verplaetsen -- Department of Structural Engineering and Building Materials</i> Indicative price: unknown | 6 | | 1 | A:1 | 180 |
| 2 | E051430 Fire Dynamics <i>Tarek Beji -- Department of Structural Engineering and Building Materials</i> Indicative price: € 200 | 6 | | 1 | B:1 | 180 |
| 3 | E051640 Data-Driven Management of Fire Incidents <i>Steven Verstockt -- Department of Electronics and Information Systems</i> Indicative price: € 800 | 3 | | 1 | A:1 | 90 |
| 4 | E039161 Thermodynamics, Heat and Mass Transfer <i>Georgios Maragkos -- Department of Structural Engineering and Building Materials</i> Indicative price: unknown | 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> Indicative price: € 0 | 3 | | 1 | A:1 | 90 |
| 6 | E051461 Interaction between People and Fire <i>Edwin Galea -- Department of Structural Engineering and Building Materials</i> Indicative price: € 0 | 6 | | 1 | A:2 | 180 |
| 7 | E051550 Risk Management <i>Ruben Van Coile -- Department of Structural Engineering and Building Materials</i> Indicative price: € 0 | 6 | | 1 | A:2 | 180 |
| 8 | E051590 Compartmentation Strategies <i>David Maeso Asua -- Department of Structural Engineering and Building Materials</i> Indicative price: unknown | 3 | | 1 | A:2 | 90 |
| 9 | E051600 Structural Fire Engineering <i>Thomas Thienpont -- Department of Structural Engineering and Building Materials</i> Indicative price: € 0 | 6 | | 1 | A:2 | 180 |
| 10 | E051421 Fluid Mechanics Applications in Fire <i>Tom De Mulder -- Department of Civil Engineering</i> Indicative price: € 90 | 6 | | 1 | A:2 | 180 |
| 11 | E051700 CFD for Fire Safety Engineering <i>Tarek Beji -- Department of Structural Engineering and Building Materials</i> Indicative price: € 102 | 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> Indicative price: € 0 | 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> Indicative price: € 70 | 6 | | 2 | A:1 | 180 |
| 14 | E051443 Fire Safety and Legislation <i>Jan De Saedeleer -- Department of Structural Engineering and Building Materials</i> Indicative price: unknown | 3 | | 2 | A:1 | 90 |

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|----|---------|---|---|---|-----|-----|
| 15 | E051610 | Passive Fire Protection <i>Emmanuel Annerel -- Department of Structural Engineering and Building Materials</i> Indicative price: unknown | 3 | 2 | A:1 | 90 |
| 16 | E061522 | Performance-Based Design <i>Patrick van Hees -- Department of Structural Engineering and Building Materials</i> Indicative price: € 1,165 | 6 | 2 | A:1 | 180 |
| 17 | E051630 | Fire Safety Strategy Project <i>David Maeso Asua -- Department of Structural Engineering and Building Materials</i> Indicative price: unknown | 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 <i>Emmanuel Annerel -- Department of Structural Engineering and Building Materials</i> Indicative price: unknown | 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> Indicative price: € 0 | 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> Indicative price: € 0 | 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 <i>Petra Andries -- Department of Marketing, Innovation and Organisation</i> Indicative price: € 33 | 3 | | | A:1 | 90 |
| 2 | E037321 Turbomachines <i>Joris Degroote -- Department of Electromechanical, Systems and Metal Engineering</i> Indicative price: € 0 | 6 | | | B:1 | 180 |
| 3 | E045930 Modelling of Turbulence and Combustion <i>Alexander Snegirev -- Department of Structural Engineering and Building Materials</i> Indicative price: unknown | 3 | | | A:1 | 90 |
| 4 | E051560 FSE Based Firefighting <i>Karel Lambert -- Department of Structural Engineering and Building Materials</i> Indicative price: unknown | 3 | | | B:1 | 90 |
| 5 | E051581 Fire Research Seminar <i>Bart Merci -- Department of Structural Engineering and Building Materials</i> Indicative price: € 0 | 3 | | | A:1 | 90 |
| 6 | E099400 Research Internship <i>Patrick Segers -- Department of Electronics and Information Systems</i> Indicative price: unknown | 6 | | | A:J | 180 |

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|---|---------|--|---|--|-----|----|
| 7 | E099400 | Research Internship <i>Patrick Segers -- Department of Electronics and Information Systems</i> Indicative price: unknown | 3 | | B:J | 90 |
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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] <i>Patrick Segers -- Department of Electronics and Information Systems</i> Indicative price: unknown | 6 | | | A:J | 180 |
| 2 | E098010 Integrated Portfolio [en, nl] <i>Hiep Luong -- Department of Telecommunications and Information Processing</i> Indicative price: € 50 | 6 | | | A:J | 180 |
| 3 | E098010 Integrated Portfolio [en, nl] <i>Hiep Luong -- Department of Telecommunications and Information Processing</i> Indicative price: € 50 | 3 | | | B:J | 90 |
| 4 | E037810 Safety of Electrical and Mechanical Installations [nl] <i>Jos Knockaert -- Department of Electromechanical, Systems and Metal Engineering</i> Indicative price: unknown | 3 | | | A:2 | 90 |
| 5 | E039060 Sustainable Energy and Rational Use of Energy <i>Jeroen Beeckman -- Department of Electronics and Information Systems</i> Indicative price: € 7 | 4 | | | A:2 | 120 |
| 6 | E078310 Sustainable Use of Materials: Metals [nl] <i>Kim Verbeken -- Department of Materials, Textiles and Chemical Engineering</i> Indicative price: € 8 | 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> Indicative price: € 0 | 3 | | | A:2 | 90 |
| 8 | E078010 Technology and Environment <i>Luc Martens -- Department of Information Technology</i> Indicative price: € 0 | 3 | | | A:1 | 90 |
| 9 | E078752 Water and Air Quality Management <i>Joris Thybaut -- Department of Materials, Textiles and Chemical Engineering</i> Indicative price: € 0 | 4 | | | A:2 | 120 |
| 10 | E092100 Biosystems [nl] <i>Pascal Verdonck -- Department of Electronics and Information Systems</i> Indicative price: unknown | 3 | | | A:1 | 90 |
| 11 | E075310 Ethics, Engineering and Society [nl] <i>Seppe Segers -- Department of Philosophy and Moral Sciences</i> Indicative price: unknown | 3 | | | A:2 | 90 |
| 12 | C004009 History and Philosophy of Sciences [nl] <i>Maarten Van Dyck -- Department of Philosophy and Moral Sciences</i> Indicative price: € 0 | 3 | | | A:1 ^a | 90 |
| 13 | E076320 The Information Society and ICT [nl] <i>Erik Mannens -- Department of Electronics and Information Systems</i> Indicative price: unknown | 3 | | | A:2 | 90 |
| 14 | A001900 Introduction to Psychology [nl] <i>Wim Notebaert -- Department of Experimental Psychology</i> Indicative price: unknown | 3 | | | A:1 | 90 |
| 15 | H001977 Coaching and Diversity [nl] <i>Elisabeth De Schauwer -- Department of Special Education</i> Indicative price: € 0 | 3 | UKV | | A:J | 90 |
| 16 | A005503 Context and Nuance. A Critical Reflection on Current Topics [nl] <i>Stef Craps -- Department of Literary Studies</i> Indicative price: € 0 | 6 | UKV | | A:1 | 180 |
| 17 | E076450 Basic Entrepreneurship [nl] <i>Yannick Dillen -- Department of Marketing, Innovation and Organisation</i> Indicative price: unknown | 3 | UKV | | A:1 | 90 |

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|----|---------|---|---|-----|----------|-----|
| 18 | A005646 | Introduction to Business Law [nl] <i>Diederik Bruloot -- Department of Interdisciplinary Study of Law, Private Law and Business Law</i> Indicative price: unknown | 3 | | A:1 | 90 |
| 19 | E076460 | Dare to Venture <i>Johan Verrue -- Department of Marketing, Innovation and Organisation</i> Indicative price: unknown | 4 | | A:2 | 120 |
| 20 | E076471 | Dare to Start <i>Wouter Haerick -- Department of Information Technology</i> Indicative price: unknown | 3 | | A:2 | 90 |
| 21 | E076621 | Principles of Law and Construction Law [nl] <i>Jelle Laverge -- Department of Architecture and Urban Planning</i> Indicative price: unknown | 3 | | A:1 | 90 |
| 22 | E076951 | Engineering Economy <i>Sofie Verbrugge -- Department of Information Technology</i> Indicative price: € 60 | 6 | | A:1 | 180 |
| 23 | E076431 | Introduction to Entrepreneurship <i>Petra Andries -- Department of Marketing, Innovation and Organisation</i> Indicative price: € 33 | 3 | | A:1 | 90 |
| 24 | H002169 | Powerful Learning Environments [nl] <i>Bram De Wever -- Department of Educational Studies</i> Indicative price: € 50 | 6 | | A:1 | 180 |
| 25 | H002196 | Classroom Management and Reflection [nl] <i>Tijds Rotsaert -- Department of Educational Studies</i> Indicative price: € 50 | 4 | | A:2 | 120 |
| 26 | H002197 | The Teacher within School and Society [nl] <i>Melissa Tuytens -- Department of Educational Studies</i> Indicative price: € 50 | 4 | | A:1 | 120 |
| 27 | H002198 | Psychology of Adolescence [nl] <i>Wim Beyers -- Department of Developmental, Personality and Social Psychology</i> Indicative price: € 51 | 4 | | A:1 | 120 |
| 28 | F000083 | Macroeconomics [nl] <i>Freddy Heylen -- Department of Economics</i> Indicative price: € 65 | 6 | | A:1 | 180 |
| 29 | H001010 | Introduction Industrial Psychology [nl] <i>Bart Wille -- Department of Developmental, Personality and Social Psychology</i> Indicative price: € 45 | 5 | | A:2 | 150 |
| 30 | F000551 | Business Skills <i>Mieke Audenaert -- Department of Marketing, Innovation and Organisation</i> Indicative price: € 46 | 4 | | C:2 | 120 |
| 31 | A003001 | Academic English <i>Geert Jacobs -- Department of Linguistics</i> Indicative price: € 0 | 3 | UKV | B:1, A:2 | 90 |
| 32 | E075800 | Communication [nl] <i>Leen Pollefliet -- Department of Information Technology</i> Indicative price: € 68 | 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 Indicative price: unknown | 24 | | 2 | B:J | 720 |

Programme related study costs

None

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 |

Learning materials

The prices stated are indicative and subject to fluctuations.

The list of learning materials per course unit can be found in the course sheets.