

Faculty of Engineering and Architecture

Master of Science in Fire Safety Engineering

Language of instruction: English

Programme version 5

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 | E051581 Fire Research Seminar <i>Bart Merci -- Department of Structural Engineering and Building Materials</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>Edwin Galea -- Department of Structural Engineering and Building Materials</i> | 6 | | 1 | A:2 | 180 |
| 7 | E051550 Risk Management <i>Robby Caspeele -- 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>Ruben Van Coile -- 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 | E051482 Active Fire Protection I: Detection and Suppression <i>Christian Gryspeerdt -- Department of Structural Engineering and Building Materials</i> | 6 | | 2 | A:1 | 180 |
| 12 | 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 |
| 13 | E051700 CFD for Fire Safety Engineering <i>Tarek Beji -- Department of Structural Engineering and Building Materials</i> | 3 | | 2 | A:1 | 90 |
| 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.
 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 should first take Analysis of Structures (E051511) in year 1 and will subscribe to 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.

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>Ruben Van Coile -- 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 | E076431 Introduction to Entrepreneurship <i>Petra Andries -- Department of Marketing, Innovation and Organisation</i> | 3 | | | A:1 | 90 |
| 2 | E037321 Turbomachines <i>Joris Degroote -- Department of Electromechanical, Systems and Metal Engineering</i> | 6 | | | B:1 | 180 |
| 3 | E045930 Modelling of Turbulence and Combustion <i>Bart Merci -- 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:2 | 90 |
| 5 | E051640 Data-Driven Management of Fire Incidents <i>Steven Verstockt -- Department of Electronics and Information Systems</i> | 3 | | | A:1 | 90 |

3.2 Elective Social Courses

Subscribe to no more 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 | E099960 Internship 1 [en, nl] <i>Patrick Segers -- Department of Electronics and Information Systems</i> | 3 | | | B:2, A:1 | 90 |
| 2 | E099970 Internship 2 [en, nl] <i>Patrick Segers -- Department of Electronics and Information Systems</i> | 3 | | | B:2, A:1 | 90 |
| 3 | E099980 Internship 3 [en, nl] <i>Patrick Segers -- Department of Electronics and Information Systems</i> | 6 | | | B:2, A:1 | 180 |
| 4 | E099920 International Internship 1 <i>Patrick Segers -- Department of Electronics and Information Systems</i> | 3 | | | B:2, A:1 | 90 |
| 5 | E099930 International Internship 2 <i>Patrick Segers -- Department of Electronics and Information Systems</i> | 3 | | | B:2, A:1 | 90 |
| 6 | E099940 International Internship 3 <i>Patrick Segers -- Department of Electronics and Information Systems</i> | 6 | | | B:2, A:1 | 180 |
| 7 | E037810 Safety of Electrical and Mechanical Installations [nl] <i>Jos Knockaert -- Department of Electromechanical, Systems and Metal Engineering</i> | 3 | | | A:2 | 90 |
| 8 | E039060 Sustainable Energy and Rational Use of Energy <i>Jeroen Beeckman -- Department of Electronics and Information Systems</i> | 4 | | | A:2 | 120 |
| 9 | E065460 Rational Use of Materials <i>Tom Depover -- Department of Materials, Textiles and Chemical Engineering</i> | 5 | | | A:1 | 150 |
| 10 | E078010 Technology and Environment <i>Luc Martens -- Department of Information Technology</i> | 3 | | | A:1 | 90 |
| 11 | E078751 Water and Air Quality Engineering <i>Joris Thybaut -- Department of Materials, Textiles and Chemical Engineering</i> | 4 | | | A:2 | 120 |

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|----|---------|--|---|-----|-----|-----|
| 12 | E075310 | Ethics, Engineering and Society [nl] <i>Guido Pennings -- Department of Philosophy and Moral Sciences</i> | 3 | | A:2 | 90 |
| 13 | E075060 | Philosophy and Science [nl] <i>Maarten Van Dyck -- Department of Philosophy and Moral Sciences</i> | 3 | | A:1 | 90 |
| 14 | E076320 | The Information Society and ICT <i>Erik Mannens -- Department of Electronics and Information Systems</i> | 3 | | A:1 | 90 |
| 15 | A001900 | Introduction to Psychology [nl] <i>Wim Notebaert -- Department of Experimental Psychology</i> | 3 | | A:1 | 90 |
| 16 | E076130 | Introduction to Human Resource Management | 3 | | | 90 |
| 17 | H001977 | Coaching and Diversity [nl] <i>Elisabeth De Schauwer -- Department of Special Education</i> | 3 | UKV | A:J | 90 |
| 18 | E076431 | Introduction to Entrepreneurship <i>Petra Andries -- Department of Marketing, Innovation and Organisation</i> | 3 | | A:1 | 90 |
| 19 | E076460 | Dare to Venture <i>Johan Verrue -- Department of Marketing, Innovation and Organisation</i> | 4 | | A:2 | 120 |
| 20 | E076471 | Dare to Start <i>Frank Gielen -- 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 | E076520 | Commercial Law [nl] <i>Diederik Bruloot -- Department of Interdisciplinary Study of Law, Private Law and Business Law</i> | 3 | | A:1 | 90 |
| 23 | E076930 | Financial and Cost Price Reporting in Companies [nl] <i>Faculteit Economie en Bedrijfskunde, Sophie Maussen -- Department of Accounting, Corporate Finance and Taxation</i> | 6 | | A:1 | 180 |
| 24 | H002169 | Powerful Learning Environments [nl] <i>Bram De Wever -- Department of Educational Studies</i> | 6 | | A:1 | 180 |
| 25 | H002196 | Classroom Management and Reflection [nl] <i>Melissa Tuytens -- Department of Educational Studies</i> | 4 | | A:2 | 120 |
| 26 | H002197 | The Teacher within School and Society [nl] <i>Melissa Tuytens -- Department of Educational Studies</i> | 4 | | A:1 | 120 |
| 27 | H002198 | Psychology of Adolescence [nl] <i>Wim Beyers -- Department of Developmental, Personality and Social Psychology</i> | 4 | | A:1 | 120 |
| 28 | F000083 | Macroeconomics [nl] <i>Freddy Heylen -- Department of Economics</i> | 6 | | A:1 | 180 |
| 29 | H001010 | Introduction Industrial Psychology [nl] <i>Bart Wille -- Department of Developmental, Personality and Social Psychology</i> | 5 | | A:2 | 150 |
| 30 | F000551 | Business Skills <i>Mieke Audenaert -- Department of Marketing, Innovation and Organisation</i> | 4 | | C:2 | 120 |
| 31 | K001339 | Sustainability Thinking [nl] <i>Thomas Block -- Department of Political Sciences</i> | 5 | UKV | A:J | 150 |

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 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 |