

Faculty of Engineering and Architecture  
Master of Science in Civil Engineering

Language of instruction: English

Programme version 11

## 1 General Courses 64 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E044940 FEM and Constitutive Material Laws in Structural Engineering Diego Lorenzo Allaix -- Department of Structural Engineering and Building Materials <a href="#">Indicative price: unknown</a>	3		1	B:1	90
2	E040661 Structural Dynamics Mia Loccufier -- Department of Electromechanical, Systems and Metal Engineering <a href="#">Indicative price: € 8</a>	5		1	B:1	150
3	E045621 Groundwater and Contaminant Flow Herman Peiffer -- Department of Civil Engineering <a href="#">Indicative price: unknown</a>	4		1	B:1	120
4	E044311 Structural Stability Robby Caspeele -- Department of Structural Engineering and Building Materials <a href="#">Indicative price: € 20</a>	6		1	A:1	180
5	E045860 Water Management and Environment Tom De Mulder -- Department of Civil Engineering <a href="#">Indicative price: € 26</a>	5		1	B:1	150
6	E052621 Concrete Structures: Prestressed Concrete and Slabs Roman Wan-Wendner -- Department of Structural Engineering and Building Materials <a href="#">Indicative price: € 20</a>	6		1	A:2	180
7	E054820 Inland Waterways and Locks Tom De Mulder -- Department of Civil Engineering <a href="#">Indicative price: € 40</a>	6		1	B:2	180
8	E052210 Geotechnics Mahya Roustaei -- Department of Civil Engineering <a href="#">Indicative price: unknown</a>	5		1	B:2	150
9	E053560 Specialised Road Engineering and Mobility Pieter De Winne -- Department of Civil Engineering <a href="#">Indicative price: € 0</a>	5		1	B:2	150
10	E050923 Structural Reliability and Risk Analysis Robby Caspeele -- Department of Structural Engineering and Building Materials <a href="#">Indicative price: € 15</a>	4		1	A:2	120
11	E054920 Coastal Engineering and Harbour Construction Peter Troch -- Department of Civil Engineering <a href="#">Indicative price: € 0</a>	6		2	B:1	180
12	E044821 Advanced Bridge and Tunnel Engineering Hans De Backer -- Department of Civil Engineering <a href="#">Indicative price: € 0</a>	6		2	A:1	180
13	E050100 Design of Civil Structures Bart De Pauw -- Department of Civil Engineering <a href="#">Indicative price: unknown</a>	3		2	B:2	90

## 2 Elective Courses

Subscribe to

- Either 20 credit units from 1 major from the following list.
- Either 18 credit units from 1 minor from the following list.

Subject to approval by the faculty.

## 2.1 Major Dredging and Offshore Engineering

20 credits

Subscribe to 20 credit units from the following list. Subject to approval by the faculty.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E055120 Introduction to Ships and Marine Technology Evert Lataire -- Department of Civil Engineering <a href="#">Indicative price: € 1,020</a>	4		1	A:1	120
2	E055400 Coastal Hydrodynamics Peter Troch -- Department of Civil Engineering <a href="#">Indicative price: € 15</a>	3		2	A:1	90
3	E044671 Offshore Foundations Bruno Stuyts -- Department of Civil Engineering <a href="#">Indicative price: unknown</a>	4		2	A:1	120
4	E054680 Dredging: Techniques and Processes Mahya Roustaei -- Department of Civil Engineering <a href="#">Indicative price: unknown</a>	5		2	A:2	150
5	E044666 Offshore Structures Andreas Kortenhaus -- Department of Civil Engineering <a href="#">Indicative price: € 0</a>	4		2	A:2	120

## 2.2 Major Construction Design

20 credits

Subscribe to 20 credit units from the following list. Subject to approval by the faculty.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E061502 Spatial Structures Jan Belis -- Department of Structural Engineering and Building Materials <a href="#">Indicative price: € 15</a>	6		1	A:1	180
2	E044902 Conceptual Design Bart De Pauw -- Department of Civil Engineering <a href="#">Indicative price: unknown</a>	5		1	A:2	150
3	E044571 Non-linear and Plastic Methods of Structural Analysis Robby Caspeele -- Department of Structural Engineering and Building Materials <a href="#">Indicative price: € 20</a>	3		2	A:1	90
4	E044930 Seismic Design Hervé Degée -- Department of Structural Engineering and Building Materials <a href="#">Indicative price: € 0</a>	3		2	A:2	90
5	E044631 Glass and Facade Structures Jan Belis -- Department of Structural Engineering and Building Materials <a href="#">Indicative price: € 15</a>	3		2	A:2	90

## 2.3 Minor Operations Management

18 credits

Subscribe to 18 credit units from the following list, with 6 credit units with reference a. Subject to approval by the faculty.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E076221 Manufacturing Planning and Control Birger Raa -- Department of Industrial Systems Engineering and Product Design <a href="#">Indicative price: € 0</a>	6	a		A:1	180
2	E004255 Operations Research Models and Methods El-Houssaine Aghezzaf -- Department of Industrial Systems Engineering and Product Design <a href="#">Indicative price: € 0</a>	6			A:1	180
3	E060240 Quality Engineering and Industrial Statistics Stijn De Vuyst -- Department of Industrial Systems Engineering and Product Design <a href="#">Indicative price: € 50</a>	6			A:2	180
4	E076951 Engineering Economy Sofie Verbrugge -- Department of Information Technology <a href="#">Indicative price: € 60</a>	6			A:1	180

## 3 Elective Courses

Subscribe to:

- Either 12 credit units from 2 or 3 modules from the following list (in combination with 1 major)
- Either 14 credit units from 2 or 3 modules from the following list (in combination with 1 minor)

Subject to approval by the faculty.

At least 6 credit units of elective social courses and at least 6 credit units of technical courses.

### 3.1 Elective Courses Civil Engineering

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

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E052630 Prefabricated Concrete Constructions Stijn Matthys -- Department of Structural Engineering and Building Materials <a href="#">Indicative price: € 75</a>	3			A:1	90
2	E080830 Information Management in Architecture and Construction [nl, en] Paulus Present -- Department of Architecture and Urban Planning <a href="#">Indicative price: € 0</a>	3			A:2	90
3	E050720 Diagnosis and Repair of Buildings Stijn Matthys -- Department of Structural Engineering and Building Materials <a href="#">Indicative price: € 0</a>	3			A:1	90
4	E065480 Life Cycle Assessment of Materials and Structures Nele De Belie -- Department of Structural Engineering and Building Materials <a href="#">Indicative price: € 12</a>	3			A:2	90
5	E051540 Explosions and Industrial Fire Safety Filip Verplaetsen -- Department of Structural Engineering and Building Materials <a href="#">Indicative price: unknown</a>	6			A:1	180
6	E051610 Passive Fire Protection Emmanuel Annerel -- Department of Structural Engineering and Building Materials <a href="#">Indicative price: unknown</a>	3			A:1	90
7	E086621 Planning and Transition: Mobility Koos Fransen -- Department of Industrial Systems Engineering and Product Design <a href="#">Indicative price: unknown</a>	3			A:1	90
8	E053620 Railroads [nl] Jan Mys -- Department of Civil Engineering <a href="#">Indicative price: unknown</a>	3			A:2	90
9	E055320 Ship Behaviour in Shallow and Confined Water Guillaume Delefortrie -- Department of Civil Engineering <a href="#">Indicative price: € 25</a>	3			A:2	90
10	E063671 Biomaterials and Tissue Engineering Peter Dubruel -- Department of Organic Chemistry <a href="#">Indicative price: unknown</a>	5			A:1	150
11	E063682 Biomechanics Charlotte Debbaut -- Department of Electronics and Information Systems <a href="#">Indicative price: € 0</a>	6			A:1	180
12	E092623 Modelling of Physiological Systems Patrick Segers -- Department of Electronics and Information Systems <a href="#">Indicative price: € 80</a>	5			A:2	150
13	E099400 Research Internship Patrick Segers -- Department of Electronics and Information Systems <a href="#">Indicative price: unknown</a>	6			A:J	180
14	E099400 Research Internship Patrick Segers -- Department of Electronics and Information Systems <a href="#">Indicative price: unknown</a>	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] Patrick Segers -- Department of Electronics and Information Systems <a href="#">Indicative price: unknown</a>	6			A:J	180
2	E098010 Integrated Portfolio [en, nl] Hiep Luong -- Department of Telecommunications and Information Processing <a href="#">Indicative price: € 50</a>	6			A:J	180
3	E098010 Integrated Portfolio [en, nl] Hiep Luong -- Department of Telecommunications and Information Processing <a href="#">Indicative price: € 50</a>	3			B:J	90

4	E037810	Safety of Electrical and Mechanical Installations [nl] Jos Knockaert -- Department of Electromechanical, Systems and Metal Engineering <a href="#">Indicative price: unknown</a>	3		A:2	90
5	E039060	Sustainable Energy and Rational Use of Energy Jeroen Beeckman -- Department of Electronics and Information Systems <a href="#">Indicative price: € 7</a>	4		A:2	120
6	E078310	Sustainable Use of Materials: Metals [nl] Kim Verbeke -- Department of Materials, Textiles and Chemical Engineering <a href="#">Indicative price: € 8</a>	3		A:1	90
7	E078320	Sustainable Use of Materials: Plastics and Derived Materials [nl] Lode Daelemans -- Department of Materials, Textiles and Chemical Engineering <a href="#">Indicative price: € 0</a>	3		A:2	90
8	E078010	Technology and Environment Luc Martens -- Department of Information Technology <a href="#">Indicative price: € 0</a>	3		A:1	90
9	E078752	Water and Air Quality Management Joris Thybaut -- Department of Materials, Textiles and Chemical Engineering <a href="#">Indicative price: € 0</a>	4		A:2	120
10	E092100	Biosystems [nl] Pascal Verdonck -- Department of Electronics and Information Systems <a href="#">Indicative price: unknown</a>	3		A:1	90
11	E075310	Ethics, Engineering and Society [nl] Seppe Segers -- Department of Philosophy and Moral Sciences <a href="#">Indicative price: unknown</a>	3		A:2	90
12	C004009	History and Philosophy of Sciences [nl] Maarten Van Dyck -- Department of Philosophy and Moral Sciences <a href="#">Indicative price: € 0</a>	3		A:1	90
13	E076320	The Information Society and ICT [nl] Erik Mannens -- Department of Electronics and Information Systems <a href="#">Indicative price: unknown</a>	3		A:2	90
14	A001900	Introduction to Psychology [nl] Wim Notebaert -- Department of Experimental Psychology <a href="#">Indicative price: unknown</a>	3		A:1	90
15	H001977	Coaching and Diversity [nl] Elisabeth De Schauwer -- Department of Special Education <a href="#">Indicative price: € 0</a>	3	UKV	A:J	90
16	A005503	Context and Nuance. A Critical Reflection on Current Topics [nl] Stef Craps -- Department of Literary Studies <a href="#">Indicative price: € 0</a>	6	UKV	A:1	180
17	E076450	Basic Entrepreneurship [nl] Yannick Dillen -- Department of Marketing, Innovation and Organisation <a href="#">Indicative price: unknown</a>	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 <a href="#">Indicative price: unknown</a>	3		A:1	90
19	E076460	Dare to Venture Johan Verrue -- Department of Marketing, Innovation and Organisation <a href="#">Indicative price: unknown</a>	4		A:2	120
20	E076471	Dare to Start Frank Gielen -- Department of Information Technology <a href="#">Indicative price: unknown</a>	3		A:2	90
21	E076621	Principles of Law and Construction Law [nl] Jelle Laverge -- Department of Architecture and Urban Planning <a href="#">Indicative price: unknown</a>	3		A:1	90
22	E076951	Engineering Economy Sofie Verbrugge -- Department of Information Technology <a href="#">Indicative price: € 60</a>	6		A:1	180
23	E076431	Introduction to Entrepreneurship Petra Andries -- Department of Marketing, Innovation and Organisation <a href="#">Indicative price: € 33</a>	3		A:1	90

24	H002169	Powerful Learning Environments [nl] Bram De Wever -- Department of Educational Studies <a href="#">Indicative price: € 50</a>	6		A:1	180
25	H002196	Classroom Management and Reflection [nl] Tijs Rotsaert -- Department of Educational Studies <a href="#">Indicative price: € 50</a>	4		A:2	120
26	H002197	The Teacher within School and Society [nl] Melissa Tuytens -- Department of Educational Studies <a href="#">Indicative price: € 50</a>	4		A:1	120
27	H002198	Psychology of Adolescence [nl] Wim Beyers -- Department of Developmental, Personality and Social Psychology <a href="#">Indicative price: € 51</a>	4		A:1	120
28	F000083	Macroeconomics [nl] Freddy Heylen -- Department of Economics <a href="#">Indicative price: € 65</a>	6		A:1	180
29	H001010	Introduction Industrial Psychology [nl] Bart Wille -- Department of Developmental, Personality and Social Psychology <a href="#">Indicative price: € 45</a>	5		A:2	150
30	F000551	Business Skills Mieke Audenaert -- Department of Marketing, Innovation and Organisation <a href="#">Indicative price: € 46</a>	4		C:2	120
31	A003001	Academic English Geert Jacobs -- Department of Linguistics <a href="#">Indicative price: € 0</a>	3	UKV	B:1, A:2	90
32	E075800	Communication [nl] Leen Pollefliet -- Department of Information Technology <a href="#">Indicative price: € 68</a>	3		A:1	90

### 3.3 Elective Courses Ghent University

No more than 6 course units from the study programmes of Ghent University (social courses or technical courses), 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 <a href="#">Indicative price: unknown</a>	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.