



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 <i>Diego Lorenzo Allaix -- Department of Structural Engineering and Building Materials</i>	3		1	B:1	90
2	E040661 Structural Dynamics <i>Mia Loccufier -- Department of Electromechanical, Systems and Metal Engineering</i>	5		1	B:1	150
3	E045621 Groundwater and Contaminant Flow <i>Herman Peiffer -- Department of Civil Engineering</i>	4		1	B:1	120
4	E044311 Structural Stability <i>Robby Caspee -- Department of Structural Engineering and Building Materials</i>	6		1	A:1	180
5	E045860 Water Management and Environment <i>Tom De Mulder -- Department of Civil Engineering</i>	5		1	B:1	150
6	E052621 Concrete Structures: Prestressed Concrete and Slabs <i>Roman Wan-Wendner -- Department of Structural Engineering and Building Materials</i>	6		1	A:2	180
7	E054820 Inland Waterways and Locks <i>Tom De Mulder -- Department of Civil Engineering</i>	6		1	B:2	180
8	E052210 Geotechnics <i>Mahya Roustaei Hossein Abadi -- Department of Civil Engineering</i>	5		1	B:2	150
9	E053560 Specialised Road Engineering and Mobility <i>Pieter De Winne -- Department of Civil Engineering</i>	5		1	B:2	150
10	E050923 Structural Reliability and Risk Analysis <i>Robby Caspee -- Department of Structural Engineering and Building Materials</i>	4		1	A:2	120
11	E054920 Coastal Engineering and Harbour Construction <i>Peter Troch -- Department of Civil Engineering</i>	6		2	B:1	180
12	E044821 Advanced Bridge and Tunnel Engineering <i>Hans De Backer -- Department of Civil Engineering</i>	6		2	A:1	180
13	E050100 Design of Civil Structures <i>Bart De Pauw -- Department of Civil Engineering</i>	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 <i>Evert Lataire -- Department of Civil Engineering</i>	4		1	A:1	120
2	E055400 Coastal Hydrodynamics <i>Peter Troch -- Department of Civil Engineering</i>	3		2	A:1	90
3	E044671 Offshore Foundations <i>Bruno Stuyts -- Department of Civil Engineering</i>	4		2	A:1	120

4	E054680	Dredging: Techniques and Processes <i>Mahya Roustaei Hossein Abadi -- Department of Civil Engineering</i>	5	2	A:2	150
5	E044666	Offshore Structures <i>Andreas Kortenhaus -- Department of Civil Engineering</i>	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 <i>Jan Belis -- Department of Structural Engineering and Building Materials</i>	6		1	A:1	180
2	E044902	Conceptual Design <i>Bart De Pauw -- Department of Civil Engineering</i>	5		1	A:2	150
3	E044571	Non-linear and Plastic Methods of Structural Analysis <i>Robby Caspée -- Department of Structural Engineering and Building Materials</i>	3		2	A:1	90
4	E044930	Seismic Design <i>Hervé Degée -- Department of Structural Engineering and Building Materials</i>	3		2	A:2	90
5	E044631	Glass and Facade Structures <i>Jan Belis -- Department of Structural Engineering and Building Materials</i>	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 <i>Birger Raa -- Department of Industrial Systems Engineering and Product Design</i>	6	a		A:1	180
2	E004255	Operations Research Models and Methods <i>El-Houssaine Aghezzaf -- Department of Industrial Systems Engineering and Product Design</i>	6			A:1	180
3	E060240	Quality Engineering and Industrial Statistics <i>Stijn De Vuyst -- Department of Industrial Systems Engineering and Product Design</i>	6			A:2	180
4	E076951	Engineering Economy <i>Sofie Verbrugge -- Department of Information Technology</i>	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 <i>Stijn Matthys -- Department of Structural Engineering and Building Materials</i>	3			A:1	90
2	E080830	Information Management in Architecture and Construction [nl, en] <i>Paulus Present -- Department of Architecture and Urban Planning</i>	3			A:2	90
3	E050720	Diagnosis and Repair of Buildings <i>Stijn Matthys -- Department of Structural Engineering and Building Materials</i>	3			A:1	90
4	E065480	Life Cycle Assessment of Materials and Structures <i>Nele De Belie -- Department of Structural Engineering and Building Materials</i>	3			A:2	90
5	E051540	Explosions and Industrial Fire Safety <i>Filip Verplaetse -- Department of Structural Engineering and Building Materials</i>	6			A:1	180
6	E051610	Passive Fire Protection <i>Emmanuel Anerel -- Department of Structural Engineering and Building Materials</i>	3			A:1	90
7	E086621	Planning and Transition: Mobility <i>Koos Fransen -- Department of Civil Engineering</i>	3			A:1	90
8	E053620	Railroads [nl] <i>Jan Mys -- Department of Civil Engineering</i>	3			A:2	90
9	E055320	Ship Behaviour in Shallow and Confined Water <i>Guillaume Delefortrie -- Department of Civil Engineering</i>	3			A:2	90
10	E063671	Biomaterials and Tissue Engineering <i>Peter Dubrule -- Department of Organic Chemistry</i>	5			A:1	150

11	E063682	Biomechanics <i>Charlotte Debbaut -- Department of Electronics and Information Systems</i>	6	A:1	180
12	E092623	Modelling of Physiological Systems <i>Patrick Segers -- Department of Electronics and Information Systems</i>	5	A:2	150
13	E099400	Research Internship <i>Patrick Segers -- Department of Electronics and Information Systems</i>	6	A:J	180
14	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>Jeroen Beeckman -- 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			A:1 ^a	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>Stef Craps -- Department of Literary Studies</i>	6	UKV		A:1	180
17	E076450	Basic Entrepreneurship [nl] <i>Yannick Dillen -- 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	E076460	Dare to Venture <i>Johan Verrué -- 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 Information Technology</i>	6			A:1	180

23	E076431	Introduction to Entrepreneurship <i>Petra Andries -- Department of Marketing, Innovation and Organisation</i>	3		A:1	90
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>Tijs Rotsaert -- 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	A003001	Academic English <i>Geert Jacobs -- Department of Linguistics</i>	3	UKV	B:1, A:2	90
32	E075800	Communication [nl] <i>Leen Pollefliet -- Department of Information Technology</i>	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	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