

Study Programme

Academic year 2022-2023

Faculty of Engineering and Architecture Master of Science in Civil Engineering

Language of instruction: English

Programme version 9

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	3	1	B:1	90
2	E040661	Structural Dynamics Mia Loccufier Department of Electromechanical, Systems and Metal Engineering	5	1	B:1	150
3	E045621	Groundwater and Contaminant Flow Herman Peiffer Department of Civil Engineering	4	1	B:1	120
4	E044311	Structural Stability Robby Caspeele Department of Structural Engineering and Building Materials	6	1	A:1	180
5	E045860	Water Management and Environment Tom De Mulder Department of Civil Engineering	5	1	B:1	150
6	E052621	Concrete Structures: Prestressed Concrete and Slabs Roman Wan-Wendner Department of Structural Engineering and Building Materials	6	1	A:2	180
7	E054820	Inland Waterways and Locks Tom De Mulder Department of Civil Engineering	6	1	B:2	180
8	E052210	Geotechnics Mahya Roustaei Hossein Abadi Department of Civil Engineering	5	1	B:2	150
9	E053560	Specialised Road Engineering and Mobility Pieter De Winne Department of Civil Engineering	5	1	B:2	150
10	E050923	Structural Reliability and Risk Analysis Robby Caspeele Department of Structural Engineering and Building Materials	4	1	A:2	120
11	E054920	Coastal Engineering and Harbour Construction Peter Troch Department of Civil Engineering	6	2	B:1	180
12	E044821	Advanced Bridge and Tunnel Engineering Hans De Backer Department of Civil Engineering	6	2	A:1	180
13	E050100	Design of Civil Structures Bart De Pauw Department of Civil Engineering	3	2	B:2	90
2	Flactive	Courses			20.	cradite

20 credits 2 Elective Courses

Subscribe to 20 credit units from 1 major or 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			CRDT Ref MT1	Session	Study
1	E055044	Introduction to Maritime Technology (partim) Evert Lataire Department of Civil Engineering	4	A:1	120
2	E044666	Offshore Structures Andreas Kortenhaus Department of Civil Engineering	4	A:1	120
3	E055400	Coastal Hydrodynamics Peter Troch Department of Civil Engineering	3	A:1	90
4	E044671	Offshore Foundations Bruno Stuyts Department of Civil Engineering	4	A:1	120

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2.2 Major Construction Design

20 credits

Subscribe to 20 cred	lit units from the f	following list. Sul	pject to approval b	by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E061502	Spatial Structures Jan Belis Department of Structural Engineering and Building Materials	6			A:1	180
2	E044571	Non-linear and Plastic Methods of Structural Analysis Robby Caspeele Department of Structural Engineering and Building Materials	3			A:1	90
3	E044902	Conceptual Design Bart De Pauw Department of Civil Engineering	5			A:2	150
4	E044930	Seismic Design Hervé Degée Department of Structural Engineering and Building Materials	3			A:2	90
5	E044631	Glass and Facade Structures Jan Belis Department of Structural Engineering and Building Materials	3			A:2	90

2.3 Minor Operations Management

20 credits

Subscribe to 20 credit units from the following list, with 12 credit units with reference a. Subject to approval by the faculty.

Nr	Course	3	CRDT	Ref	MT1	Session	Study
1	E004255	Operations Research Models and Methods El-Houssaine Aghezzaf Department of Industrial Systems Engineering and Product Design	6	а		A:1	180
2	E076221	Manufacturing Planning and Control Birger Raa Department of Industrial Systems Engineering and Product Design	6	а		A:1	180
3	E060240	Quality Engineering and Industrial Statistics [nl, en] Stijn De Vuyst Department of Industrial Systems Engineering and Product Design	6			B:2, A:2	180
4	E076820	Project Management Mario Vanhoucke Department of Business Informatics and Operations Management	6			A:2	180
5	E076950	Engineering Economy Sofie Verbrugge Department of Information Technology	4			A:1	120
6	F000551	Business Skills Mieke Audenaert Department of Marketing, Innovation and Organisation	4			C:2	120
7	F000627	Transport Economics [nl] Jochen Maes Department of Economics	6			A:2	180

3 Elective Courses 12 credits

Subscribe to 12 credit units from no less than 2 and no more than 3 modules from the following list. 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	3	CRDT	Ref	MT1	Session	Study
1	E052630	Prefabricated Concrete Constructions Stijn Matthys Department of Structural Engineering and Building Materials	3			A:1	90
2	E080830	Information Management in Architecture and Construction [en, nl] Paulus Present Department of Architecture and Urban Planning	3			A:1	90
3	E050720	Diagnosis and Repair of Buildings Stijn Matthys Department of Structural Engineering and Building Materials	3			A:1	90
4	E065480	Life Cycle Assessment of Materials and Structures Nele De Belie Department of Structural Engineering and Building Materials	3			A:2	90
5	E051540	Explosions and Industrial Fire Safety Filip Verplaetsen Department of Structural Engineering and Building Materials	6			A:1	180
6	E051610	Passive Fire Protection Emmanuel Annerel Department of Structural Engineering and Building Materials	3			A:1	90
7	E086602	Mobility and Space Robert Van der Bijl Department of Civil Engineering	5			A:1	150
8	E053620	Railroads [nl] Jan Mys Department of Civil Engineering	3			A:2	90
9	E055320	Ship Behaviour in Shallow and Confined Water Guillaume Delefortrie Department of Civil Engineering	3			A:2	90

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10 E063671	Biomaterials and Tissue Engineering Peter Dubruel Department of Organic Chemistry	5	A:1	150
11 E063682	Biomechanics Charlotte Debbaut Department of Electronics and Information Systems	6	A:1	180
12 E092621	Modelling of Physiological Systems Patrick Segers Department of Electronics and Information Systems	6	A:2	180
13 E099400	Research Internship Patrick Segers Department of Electronics and Information Systems	6	A:J	180
14 E099400	Research Internship Patrick Segers Department of Electronics and Information Systems	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).

Tui	e a course m	om 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	6			A:J	180
2	E037810	Safety of Electrical and Mechanical Installations [nl] Jos Knockaert Department of Electromechanical, Systems and Metal Engineering	3			A:2	90
3	E039060	Sustainable Energy and Rational Use of Energy Jeroen Beeckman Department of Electronics and Information Systems	4			A:2	120
4	K001339	Sustainability Thinking [nl] Thomas Block Department of Political Sciences	5	UKV		A:J	150
5	E078310	Sustainable Use of Materials: Metals [nl] Kim Verbeken Department of Materials, Textiles and Chemical Engineering	3			A:1	90
6	E078320	Sustainable Use of Materials: Plastics and Derived Materials [nl] Lode Daelemans Department of Materials, Textiles and Chemical Engineering	3			A:2	90
7	E078010	Technology and Environment Luc Martens Department of Information Technology	3			A:1	90
8	E078751	Water and Air Quality Engineering Joris Thybaut Department of Materials, Textiles and Chemical Engineering	4			A:2	120
9	E092100	Biosystems [nl] Pascal Verdonck Department of Electronics and Information Systems	3			A:1	90
10	E075310	Ethics, Engineering and Society [nl] Guido Pennings Department of Philosophy and Moral Sciences	3			A:2	90
11	E075060	Philosophy and Science [nl] Maarten Van Dyck Department of Philosophy and Moral Sciences	3			A:1	90
12	E076320	The Information Society and ICT Erik Mannens Department of Electronics and Information Systems	3			A:1	90
13	A001900	Introduction to Psychology [nl] Wim Notebaert Department of Experimental Psychology	3			A:1	90
14	H001977	Coaching and Diversity [nl] Elisabeth De Schauwer Department of Special Education	3	UKV		A:J	90
15	A005503	Context and Nuance. A Critical Reflection on Current Topics [nl] Benjamin Biebuyck Department of Literary Studies	6	UKV		A:1	180
16	E076450	Basic Entrepreneurship [nl] Yannick Dillen Department of Marketing, Innovation and Organisation	3	UKV		A:1	90
17	E076431	Introduction to Entrepreneurship Petra Andries Department of Marketing, Innovation and Organisation	3			A:1	90
18	E076460	Dare to Venture Johan Verrue Department of Marketing, Innovation and Organisation	4			A:2	120
19	E076471	Dare to Start Frank Gielen Department of Information Technology	3			A:2	90
20	E076621	Principles of Law and Construction Law [nl] Jelle Laverge Department of Architecture and Urban Planning	3			A:1	90
21	E076520	Commercial Law [nl] Diederik Bruloot Department of Interdisciplinary Study of Law, Private Law and Business Law	3			A:1	90

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22 E076930	Financial and Cost Price Reporting in Companies [nl] Sophie Maussen Department of Accounting, Corporate Finance and Taxation	6	A:1	180
23 H002169	Powerful Learning Environments [nl] Bram De Wever Department of Educational Studies	6	A:1	180
24 H002196	Classroom Management and Reflection [nl] Melissa Tuytens Department of Educational Studies	4	A:2	120
25 H002197	The Teacher within School and Society [nl] Melissa Tuytens Department of Educational Studies	4	A:1	120
26 H002198	Psychology of Adolescence [nl] Wim Beyers Department of Developmental, Personality and Social Psychology	4	A:1	120
27 F000083	Macroeconomics [nl] Freddy Heylen Department of Economics	6	A:1	180
28 H001010	Introduction Industrial Psychology [nl] Bart Wille Department of Developmental, Personality and Social Psychology	5	A:2	150
29 F000551	Business Skills Mieke Audenaert Department of Marketing, Innovation and Organisation	4	C:2	120
30 A003001	Academic English Geert Jacobs Department of Linguistics	3 UKV	B:1, A:2	90
31 E075800	Communication [nl] Leen Pollefliet Department of Information Technology	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 <u>Ghent University Elective Courses</u>. Subject to approval by the faculty.

4 Master's Dissertation			24 cr	redits
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 cours name, using the following ISO codes:

bg: Bulgarian de: German es: Spanish ja: Japanese pl: Polish sh: Kroatian/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 in 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 2023-2024 f: annually, from 2024-2025 i: annually, from 2025-2026 b: tri-annually d: bi-annually, from 2023-2024 g: bi-annually, from 2024-2025 j: bi-annually, from 2025-2026 e: tri-annually, from 2023-2024 h: tri-annually, from 2024-2025 k: tri-annually, from 2025-2026

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