GHENT UNIVERSITY

Faculty of Engineering and Architecture
Master of Science in Electromechanical Engineering -- Maritime Engineering

Language of instruction: English

Programme version 11

1 General Courses — 36 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E036130	Controlled Electrical Drives	6		1	B:1	180
		Frederik De Belie -- Department of Electromechanical, Systems and Metal Engineering					
2	E037321	Turbomachines	6		1	B:1	180
		Joris Degroote -- Department of Electromechanical, Systems and Metal Engineering					
3	E037121	Displacement Pumps, Compressors and IC Engine Fundamentals	6		1	A:1	180
		Sebastian Verhelst -- Department of Electromechanical, Systems and Metal Engineering					
4	E019331	ICT and Mechatronics	6		1	A:2	180
		Guillaume Crevecoeur -- Department of Electromechanical, Systems and Metal Engineering					
5	E040670	Mechanical Vibrations	6		1	B:2	180
		Mia Loccufier -- Department of Electromechanical, Systems and Metal Engineering					
6	E076221	Manufacturing Planning and Control	6		2	A:1	180
		Birger Raa -- Department of Industrial Systems Engineering and Product Design					

2 Courses Related to the Main Subject — 36 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E055270	Hydrostatics and Propulsion of Maritime Constructions	6		1	B:2	180
		Guillaume Delefortrie -- Department of Civil Engineering					
2	E055030	General Arrangement, Structural Arrangements and Construction of Marine Structures	6		1	B:2	180
		Philippe Rigo -- Department of Civil Engineering					
3	E055045	Introduction to Maritime Technology	6		1	A:1	180
		Evert Lataire -- Department of Civil Engineering					
4	E044311	Structural Stability	6		2	A:1	180
		Robby Caspeele -- Department of Structural Engineering and Building Materials					
5	E056600	Construction Techniques	3		2	B:2	90
		Wim De Waele -- Department of Electromechanical, Systems and Metal Engineering					
6	E055290	Manoeuvring and Seakeeping Behaviour of Maritime Constructions	6		2	A:1	180
		Guillaume Delefortrie -- Department of Civil Engineering					
7	E054670	Design of Maritime Structures	3		2	B:1	90
		Evert Lataire -- Department of Civil Engineering					

3 Elective Courses — 24 credits

Subscribe to 24 credit units from 1 path from the following list. Subject to approval by the faculty.
- 12 credit units in year 1,
- 12 credit units in year 2.

3.1 Elective Courses: Path 1

Subscribe to 24 credit units from no less than 2 and no more than 3 modules from the following list. Subject to approval by the faculty.
• Subscribe to at least 6 credit units Elective Social Courses
• and subscribe to at least 6 credit units Elective Courses Electromechanical Engineering/Faculty

3.1.1 Elective Social Courses

Subscribe to no less than 6 credit units from the following list. Subject to approval by the faculty.
The course 'Safety of Electrical and Mechanical Installations' is compulsory.

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]	6			A:J	180
		Patrick Segers -- Department of Electronics and Information Systems					
2	E037810	Safety of Electrical and Mechanical Installations [nl]	3			A:2	90
		Jos Knockaert -- Department of Electromechanical, Systems and Metal Engineering					
3	E039060	Sustainable Energy and Rational Use of Energy	4			A:2	120
		Jeroen Beeckman -- Department of Electronics and Information Systems					
4	K001339	Sustainability Thinking [nl]	5	UKV		A:J	150
		Thomas Block -- Department of Political Sciences					
5	E078310	Sustainable Use of Materials: Metals [nl]	3			A:1	90
		Kim Verbeken -- Department of Materials, Textiles and Chemical Engineering					
6	E078320	Sustainable Use of Materials: Plastics and Derived Materials [nl]	3			A:2	90
		Lode Daelemans -- Department of Materials, Textiles and Chemical Engineering					
7	E078010	Technology and Environment	3			A:1	90
		Luc Martens -- Department of Information Technology					
8	E078752	Water and Air Quality Management	4			A:2	120
		Joris Thybaut -- Department of Materials, Textiles and Chemical Engineering					
9	E092100	Biosystems [nl]	3			A:1	90
		Pascal Verdonck -- Department of Electronics and Information Systems					
10	E075310	Ethics, Engineering and Society [nl]	3			A:2	90
		Seppe Segers -- Department of Philosophy and Moral Sciences					
11	E075060	Philosophy and Science [nl]	3			A:1	90
		Maarten Van Dyck -- Department of Philosophy and Moral Sciences					
12	E076320	The Information Society and ICT [nl]	3			A:1	90
		Erik Mannens -- Department of Electronics and Information Systems					
13	A001900	Introduction to Psychology [nl]	3			A:1	90
		Wim Notebaert -- Department of Experimental Psychology					
14	H001977	Coaching and Diversity [nl]	3	UKV		A:J	90
		Elisabeth De Schauwer -- Department of Special Education					
15	A005503	Context and Nuance. A Critical Reflection on Current Topics [nl]	6	UKV		A:1	180
		Stef Craps -- Department of Literary Studies					
16	E076450	Basic Entrepreneurship [nl]	3	UKV		A:1	90
		Yannick Dillen -- Department of Marketing, Innovation and Organisation					
17	E076431	Introduction to Entrepreneurship	3			A:1	90
		Petra Andries -- Department of Marketing, Innovation and Organisation					
18	E076460	Dare to Venture	4			A:2	120
		Johan Verrue -- Department of Marketing, Innovation and Organisation					
19	E076471	Dare to Start	3			A:2	90
		Frank Gielen -- Department of Information Technology					
20	E076621	Principles of Law and Construction Law [nl]	3			A:1	90
		Jelle Laverge -- Department of Architecture and Urban Planning					
21	E076520	Commercial Law [nl]	3			A:1	90
		Diederik Bruloot -- Department of Interdisciplinary Study of Law, Private Law and Business Law					
22	E076951	Engineering Economy	6			A:1	180
		Sofie Verbrugge -- Department of Information Technology					
23	H002169	Powerful Learning Environments [nl]	6			A:1	180
		Bram De Wever -- Department of Educational Studies					
24	H002196	Classroom Management and Reflection [nl]	4			A:2	120
		Melissa Tuytens -- Department of Educational Studies					
25	H002197	The Teacher within School and Society [nl]	4			A:1	120
		Melissa Tuytens -- Department of Educational Studies					
26	H002198	Psychology of Adolescence [nl]	4			A:1	120
		Wim Beyers -- Department of Developmental, Personality and Social Psychology					
27	F000083	Macroeconomics [nl]	6			A:1	180
		Freddy Heylen -- Department of Economics					

Nr	Course		CRDT	Ref	MT1	Session	Study
28	H001010	Introduction Industrial Psychology [nl]	5			Z:1	150
		Bart Wille -- Department of Developmental, Personality and Social Psychology					
29	F000551	Business Skills	4			C:2	120
		Mieke Audenaert -- Department of Marketing, Innovation and Organisation					
30	A003001	Academic English	3	UKV		B:1, A:2	90
		Geert Jacobs -- Department of Linguistics					
31	E075800	Communication [nl]	3			A:1	90
		Leen Pollefliet -- Department of Information Technology					

3.1.2 Elective Courses Electromechanical Engineering/Faculty

Subscribe to at least 6 credit units from no less than 1 and no more than 2 modules from the following list. Subject to approval by the faculty.

3.1.2.1 Elective Courses Electromechanical Engineering

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E061621	Automotive Technology	3			A:2	90
		Sebastian Verhelst -- Department of Electromechanical, Systems and Metal Engineering					
2	E045930	Modelling of Turbulence and Combustion	3			A:1	90
		Alexander Snegirev -- Department of Structural Engineering and Building Materials					
3	E061960	Aeroplanes	3			A:1	90
		Benoît Marinus -- Department of Electromechanical, Systems and Metal Engineering					
4	E038320	Nuclear Reactor Technology	6			(A:2)[d]	180
		Matthias Vanderhaegen -- Department of Electromechanical, Systems and Metal Engineering					
5	E038030	Nuclear Reactor Theory: part 2	3			A:1	90
		Matthias Vanderhaegen -- Department of Electromechanical, Systems and Metal Engineering					
6	E028330	Thermal-hydraulics and Safety Analysis of Nuclear Systems	6			A:2[a]	180
		Greet Maenhout -- Department of Electromechanical, Systems and Metal Engineering					
7	E055320	Ship Behaviour in Shallow and Confined Water	3			A:2	90
		Guillaume Delefortrie -- Department of Civil Engineering					
8	E040560	Fluid Mechanics	3			A:1	90
		Joris Degroote -- Department of Electromechanical, Systems and Metal Engineering					
9	E004160	Numerical Optimisation	3			A:1	90
		Jolan Wauters -- Department of Electromechanical, Systems and Metal Engineering					
10	F000845	Business Administration [nl]	4			A:2	120
		Mirjam Knockaert -- Department of Marketing, Innovation and Organisation					
11	F000551	Business Skills	4			C:2	120
		Mieke Audenaert -- Department of Marketing, Innovation and Organisation					
12	E051610	Passive Fire Protection	3			A:1	90
		Emmanuel Annerel -- Department of Structural Engineering and Building Materials					
13	E051540	Explosions and Industrial Fire Safety	6			A:1	180
		Filip Verplaetsen -- Department of Structural Engineering and Building Materials					
14	B001375	Energy Law [nl]	4			A:2	120
		Frederik Vandendriessche -- Department of European, Public and International Law					
15	E053642	Railway Technology Fundamentals	3			A:1	90
		Hendrik Bonne -- Department of Electromechanical, Systems and Metal Engineering					
16	E053643	Advanced Railway Technology	3			A:2	90
		Hendrik Bonne -- Department of Electromechanical, Systems and Metal Engineering					
17	E053620	Railroads [nl]	3			A:2	90
		Jan Mys -- Department of Civil Engineering					

3.1.2.2 Elective Courses Faculty of Engineering and Architecture

Subscribe to course units from the study programmes of the Faculty of Engineering and Architecture. Subject to approval by the faculty.

3.1.3 Elective Courses Ghent University

Subscribe to course units from the programmes of Ghent University including the Ghent University Elective Courses. Subject to approval by the faculty.
List of Ghent University Elective Courses

3.2 Elective Courses: Path 2

Subscribe to 24 credit units from 1 minor from the following list. Subject to approval by the faculty.

3.2.1 Minor Operations Management

Subscribe to 24 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	6	a		A:1	180
		Birger Raa -- Department of Industrial Systems Engineering and Product Design					
2	E004255	Operations Research Models and Methods	6			A:1	180
		El-Houssaine Aghezzaf -- Department of Industrial Systems Engineering and Product Design					
3	E060240	Quality Engineering and Industrial Statistics	6			A:2	180
		Stijn De Vuyst -- Department of Industrial Systems Engineering and Product Design					
4	E076951	Engineering Economy	6			A:1	180
		Sofie Verbrugge -- Department of Information Technology					

3.2.2 Minor Environment and Sustainable Development

Subscribe to 24 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	C002275	Environmental Law [nl]	5			A:1	125
		Hendrik Schoukens -- Department of European, Public and International Law					
2	E065410	Sustainability of Materials	4			A:2	120
		Nele De Belie -- Department of Structural Engineering and Building Materials					
3	E078910	Environmental Impact of Radiation and Noise	3				90
4	I002700	Clean Technology	5			A:1	150
		Sophie Huysveld -- Department of Green Chemistry and Technology					
5	E065460	Rational Use of Materials	5			A:1	150
		Tom Depover -- Department of Materials, Textiles and Chemical Engineering					
6	E078752	Water and Air Quality Management	4			A:2	120
		Joris Thybaut -- Department of Materials, Textiles and Chemical Engineering					
7	E039060	Sustainable Energy and Rational Use of Energy	4			A:2	120
		Jeroen Beeckman -- Department of Electronics and Information Systems					
8	E078061	Introduction to Environmental Risk Assessment	3			A:1	90
		Karel De Schamphelaere -- Department of Animal Sciences and Aquatic Ecology					
9	I002606	Environmental Risk Assessment	5			A:1	150
		Karel De Schamphelaere -- Department of Animal Sciences and Aquatic Ecology					

3.2.3 Minor Biosystems

Subscribe to 24 credit units from the following list, with no less than 8 credit units with reference a. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E092623	Modelling of Physiological Systems	5	a		A:2	150
		Patrick Segers -- Department of Electronics and Information Systems					
2	E092662	From Genome to Organism	3	a		A:1	90
		Fransiska Malfait -- Department of Biomolecular Medicine					
3	E074011	Quantitative Cell and Tissue Analysis	6	a		A:1	180
		An Hendrix -- Department of Human Structure and Repair					
4	E063671	Biomaterials and Tissue Engineering	5			A:1	150
		Ruslan Dmitriev -- Department of Human Structure and Repair					
5	E063682	Biomechanics	6			A:1	180
		Charlotte Debbaut -- Department of Electronics and Information Systems					
6	E010371	Medical Imaging	6			A:1	180
		Stefaan Vandenberghe -- Department of Electronics and Information Systems					

3.2.4 Minor Automotive Production Engineering

Subscribe to 24 credit units from the following list, with
• no less than 6 credit units from the courses with reference a,
• no less than 6 credit units from the courses with reference b.
Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E076221	Manufacturing Planning and Control	6	a		A:1	180
		Birger Raa -- Department of Industrial Systems Engineering and Product Design					
2	E076380	Methods Engineering and Work Measurement	6	a		A:2	180
		Dieter Claeys -- Department of Industrial Systems Engineering and Product Design					
3	E060240	Quality Engineering and Industrial Statistics	6	a		A:2	180
		Stijn De Vuyst -- Department of Industrial Systems Engineering and Product Design					

4	E005770	Total Plant Automation	6	a			180
5	E066662	Environmentally Assisted Degradation of Materials	6	b		A:2	180
		Kim Verbeken -- Department of Materials, Textiles and Chemical Engineering					
6	E066270	Metal Processing and Technology	6	b		A:2	180
		Roumen Petrov -- Department of Electromechanical, Systems and Metal Engineering					
7	E900069	Composites	6	b		A:1	180
		Wim Van Paepegem -- Department of Materials, Textiles and Chemical Engineering					
8	E043070	Materials Selection in Mechanical Design	6	b		B:2	180
		Stijn Hertelé -- Department of Electromechanical, Systems and Metal Engineering					
9	E061322	Machine Design	6	c		A:1	180
		Dieter Fauconnier -- Department of Electromechanical, Systems and Metal Engineering					
10	E037121	Displacement Pumps, Compressors and IC Engine Fundamentals	6	c		A:1	180
		Sebastian Verhelst -- Department of Electromechanical, Systems and Metal Engineering					
11	E037221	IC Engines: advanced design and research	3	c		A:2	90
		Sebastian Verhelst -- Department of Electromechanical, Systems and Metal Engineering					
12	E061621	Automotive Technology	3	c		A:2	90
		Sebastian Verhelst -- Department of Electromechanical, Systems and Metal Engineering					
13	E007920	Computer Control of Industrial Processes	6	c		A:1	180
		Clara Ionescu -- Department of Electromechanical, Systems and Metal Engineering					
14	E008420	Servo Systems and Industrial Robots	3	c		A:1	90
		Guillaume Crevecoeur -- Department of Electromechanical, Systems and Metal Engineering					
15	E030520	Power Electronics	3	c		A:2	90
		Hendrik Vansompel -- Department of Electromechanical, Systems and Metal Engineering					

3.3 Elective Courses: Path 3

Subscribe to 24 credit units from 2 modules from the following list. Subject to approval by the faculty.

3.3.1 Elective Courses: Minors

Subscribe to 18 credit units from 1 minor from the following list. Subject to approval by the faculty.

3.3.1.1 Minor Operations Management

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	6	a		A:1	180
		Birger Raa -- Department of Industrial Systems Engineering and Product Design					
2	E004255	Operations Research Models and Methods	6			A:1	180
		El-Houssaine Aghezzaf -- Department of Industrial Systems Engineering and Product Design					
3	E060240	Quality Engineering and Industrial Statistics	6			A:2	180
		Stijn De Vuyst -- Department of Industrial Systems Engineering and Product Design					
4	E076951	Engineering Economy	6			A:1	180
		Sofie Verbrugge -- Department of Information Technology					

3.3.1.2 Minor Biosystems

Subscribe to no less than 18 credit units from the following list, with no less than 8 credit units with reference a. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E092623	Modelling of Physiological Systems	5	a		A:2	150
		Patrick Segers -- Department of Electronics and Information Systems					
2	E092662	From Genome to Organism	3	a		A:1	90
		Fransiska Malfait -- Department of Biomolecular Medicine					
3	E074011	Quantitative Cell and Tissue Analysis	6	a		A:1	180
		An Hendrix -- Department of Human Structure and Repair					
4	E063671	Biomaterials and Tissue Engineering	5			A:1	150
		Ruslan Dmitriev -- Department of Human Structure and Repair					
5	E063682	Biomechanics	6			A:1	180
		Charlotte Debbaut -- Department of Electronics and Information Systems					
6	E010371	Medical Imaging	6			A:1	180
		Stefaan Vandenberghe -- Department of Electronics and Information Systems					

3.3.1.3 Minor Computer Science Engineering

Subscribe to 18 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E034140	Parallel Computer Systems	6			A:1	180
		Lieven Eeckhout -- Department of Electronics and Information Systems					
2	E017930	Parallel and Distributed Software Systems	6			A:1	180
		Jan Fostier -- Department of Information Technology					
3	E017920	Design of Multimedia Applications	6			A:2	180
		Glenn Van Wallendael -- Department of Electronics and Information Systems					
4	E012320	Mobile and Broadband Access Networks	6			B:2	180
		Mario Pickavet -- Department of Information Technology					
5	E003600	Information Theory	6			B:2	180
		Heidi Steendam -- Department of Telecommunications and Information Processing					
6	E011322	Queueing Analysis and Simulation	6			A:1	180
		Joris Walraevens -- Department of Telecommunications and Information Processing					

3.3.1.4 Minor Electronics and ICT

Subscribe to 18 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E022230	Antennas and Propagation	6			A:1	180
		Hendrik Rogier -- Department of Information Technology					
2	E033021	Electromagnetic-aware High Frequency Design	6			A:1	180
		Hendrik Rogier -- Department of Information Technology					
3	E012130	Modulation and Detection	6			B:1	180
		Nele Noels -- Department of Telecommunications and Information Processing					
4	E003600	Information Theory	6			B:2	180
		Heidi Steendam -- Department of Telecommunications and Information Processing					
5	E031251	Design Methodology for FPGAs	6			A:1	180
		Dirk Stroobandt -- Department of Electronics and Information Systems					
6	E033640	High-speed Electronics	6			A:2	180
		Johan Bauwelinck -- Department of Information Technology					

3.3.1.5 Minor Materials Engineering

Subscribe to 18 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E042740	Fracture and Deformation Behaviour of Materials	6			B:1	180
		Leo Kestens -- Department of Electromechanical, Systems and Metal Engineering					
2	E068900	Structure and Dynamics of Polymers	6			B:1	180
		Karen De Clerck -- Department of Materials, Textiles and Chemical Engineering					
3	E064961	Polymer Processing and Circularity	6			A:2	180
		Dagmar D'hooge -- Department of Materials, Textiles and Chemical Engineering					
4	E065340	Micro-analysis and Structure Determination in Materials Science	6			A:1	180
		Roumen Petrov -- Department of Electromechanical, Systems and Metal Engineering					
5	E066662	Environmentally Assisted Degradation of Materials	6			A:2	180
		Kim Verbeken -- Department of Materials, Textiles and Chemical Engineering					
6	E066020	Microstructure of Materials [nl]	6			A:2	180
		Marcel Sluiter -- Department of Electromechanical, Systems and Metal Engineering					
7	E064761	Textile Functionalization	6			(A:2)[c]	180
		Karen De Clerck -- Department of Materials, Textiles and Chemical Engineering					
8	E069041	Bio-based and Synthetic Fibres	6			A:1	180
		Karen De Clerck -- Department of Materials, Textiles and Chemical Engineering					

3.3.1.6 Minor Chemical Engineering

Subscribe to 18 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E072110	Chemical Reactors: Fundamentals and Applications	6			B:1	180
		René Bos -- Department of Materials, Textiles and Chemical Engineering					
2	E071200	Unit Operations in Chemical Industry	6			B:1	180
		Geraldine Heynderickx -- Department of Materials, Textiles and Chemical Engineering					
3	E045910	Heat Engineering and Mass Transport [nl]	6			A:1	180
		Geraldine Heynderickx -- Department of Materials, Textiles and Chemical Engineering					

4	E073760	Chemical Process Design	6			B:2	180
		Philip De Smedt -- Department of Materials, Textiles and Chemical Engineering					
5	E007920	Computer Control of Industrial Processes	6			A:1	180
		Clara Ionescu -- Department of Electromechanical, Systems and Metal Engineering					
6	E071131	Sustainable Chemical Production Processes	6			A:1	180
		Kevin Van Geem -- Department of Materials, Textiles and Chemical Engineering					
7	E071181	Chemistry of Industrial Processes	6			B:2	180
		Maarten Sabbe -- Department of Materials, Textiles and Chemical Engineering					

3.3.1.7 Minor Materials Physics

Subscribe to 18 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E024610	Solid-state Physics and Semiconductors I [nl]	6			A:1	180
		Henk Vrielinck -- Department of Solid State Sciences					
2	E024641	Physics of Semiconductor Devices	6			B:2	180
		Benoit Bakeroot -- Department of Electronics and Information Systems					
3	E065340	Micro-analysis and Structure Determination in Materials Science	6			A:1	180
		Roumen Petrov -- Department of Electromechanical, Systems and Metal Engineering					
4	E026221	Plasma Physics	6			A:1	180
		Geert Verdoolaege -- Department of Applied Physics					
5	E029040	Physical Chemistry	6			B:2	180
		Iwan Moreels -- Department of Chemistry					
6	E025010	Atomic and Molecular Physics	6			A:1	180
		Veronique Van Speybroeck -- Department of Applied Physics					

3.3.1.8 Minor Power Engineering

Subscribe to 18 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E035421	Sustainable Energy	3			A:1	90
		Jan Mertens -- Department of Electromechanical, Systems and Metal Engineering					
2	E037621	Gas Turbines	3			A:1	90
		Ward De Paepe -- Department of Electromechanical, Systems and Metal Engineering					
3	E037121	Displacement Pumps, Compressors and IC Engine Fundamentals	6			A:1	180
		Sebastian Verhelst -- Department of Electromechanical, Systems and Metal Engineering					
4	E039060	Sustainable Energy and Rational Use of Energy	4			A:2	120
		Jeroen Beeckman -- Department of Electronics and Information Systems					
5	E036111	Electrical Drives [nl]	6			A:2	180
		Luc Dupré -- Department of Electromechanical, Systems and Metal Engineering					
6	E037820	Technology of Electrical Installations	3			A:2	90
		Peter Sergeant -- Department of Electromechanical, Systems and Metal Engineering					
7	E038020	Nuclear Reactor Theory: part 1	3			A:1	90
		Greet Maenhout -- Department of Electromechanical, Systems and Metal Engineering					
8	E028700	Thermal Installations	6			A:1	180
		Michel De Paepe -- Department of Electromechanical, Systems and Metal Engineering					
9	E035050	Operational Aspects of Electrical Power Systems	3			A:2	90
		Lieven Vandevelde -- Department of Electromechanical, Systems and Metal Engineering					

3.3.1.9 Minor Control Engineering and Automation

Subscribe to 18 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E005220	Linear Systems	6			A:2	180
		Gert De Cooman -- Department of Electronics and Information Systems					
2	E004021	Nonlinear Systems	6			B:1	180
		Jasper De Bock -- Department of Electronics and Information Systems					
3	E019331	ICT and Mechatronics	6			A:2	180
		Guillaume Crevecoeur -- Department of Electromechanical, Systems and Metal Engineering					
4	E008420	Servo Systems and Industrial Robots	3			A:1	90
		Guillaume Crevecoeur -- Department of Electromechanical, Systems and Metal Engineering					
5	E007920	Computer Control of Industrial Processes	6			A:1	180
		Clara Ionescu -- Department of Electromechanical, Systems and Metal Engineering					

Nr	Course		CRDT	Ref	MT1	Session	Study
6	E030520	Power Electronics	3			A:2	90
		Hendrik Vansompel -- Department of Electromechanical, Systems and Metal Engineering					
7	E005722	Modelling and Simulation of Dynamical Systems	6			A:2	180
		Guillaume Crevecoeur -- Department of Electromechanical, Systems and Metal Engineering					

3.3.1.10 Minor Photonics Engineering

Subscribe to 18 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E030610	Photonics [nl]	6			A:2	180
		Günther Roelkens -- Department of Information Technology					
2	E030660	Lasers	4			A:1	120
		Geert Morthier -- Department of Information Technology					
3	E030761	Microphotonics	6			A:1	180
		Dries Van Thourhout -- Department of Information Technology					
4	E024800	Optical Materials	6			A:1	180
		Jeroen Beeckman -- Department of Electronics and Information Systems					
5	E008446	Sensors, Actuators and Electronic Microsystems	6			A:2	180
		Herbert De Smet -- Department of Electronics and Information Systems					
6	E030721	Laboratories in Photonics Research	6			A:2	180
		Alberto Curto -- Department of Information Technology					
7	E031521	Physics of Semiconductor Technologies and Devices	4			A:2	120
		Geert Van Steenberge -- Department of Electronics and Information Systems					

3.3.1.11 Minor Environment and Sustainable Development

Subscribe to 18 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	C002275	Environmental Law [nl]	5			A:1	125
		Hendrik Schoukens -- Department of European, Public and International Law					
2	E065410	Sustainability of Materials	4			A:2	120
		Nele De Belie -- Department of Structural Engineering and Building Materials					
3	E078910	Environmental Impact of Radiation and Noise	3				90
4	I002700	Clean Technology	5			A:1	150
		Sophie Huysveld -- Department of Green Chemistry and Technology					
5	E065460	Rational Use of Materials	5			A:1	150
		Tom Depover -- Department of Materials, Textiles and Chemical Engineering					
6	E078752	Water and Air Quality Management	4			A:2	120
		Joris Thybaut -- Department of Materials, Textiles and Chemical Engineering					
7	E039060	Sustainable Energy and Rational Use of Energy	4			A:2	120
		Jeroen Beeckman -- Department of Electronics and Information Systems					
8	E078061	Introduction to Environmental Risk Assessment	3			A:1	90
		Karel De Schamphelaere -- Department of Animal Sciences and Aquatic Ecology					
9	I002606	Environmental Risk Assessment	5			A:1	150
		Karel De Schamphelaere -- Department of Animal Sciences and Aquatic Ecology					

3.3.2 Elective Social Courses

Subscribe to 6 credit units from the following list. Subject to approval by the faculty.
The course 'Safety of Electrical and Mechanical Installations' is compulsory.
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]	6			A:J	180
		Patrick Segers -- Department of Electronics and Information Systems					
2	E037810	Safety of Electrical and Mechanical Installations [nl]	3			A:2	90
		Jos Knockaert -- Department of Electromechanical, Systems and Metal Engineering					
3	E039060	Sustainable Energy and Rational Use of Energy	4			A:2	120
		Jeroen Beeckman -- Department of Electronics and Information Systems					
4	K001339	Sustainability Thinking [nl]	5	UKV		A:J	150
		Thomas Block -- Department of Political Sciences					
5	E078310	Sustainable Use of Materials: Metals [nl]	3			A:1	90
		Kim Verbeken -- Department of Materials, Textiles and Chemical Engineering					

Nr	Course		CRDT	Ref	MT1	Session	Study
6	E078320	Sustainable Use of Materials: Plastics and Derived Materials [nl]	3			A:2	90
		Lode Daelemans -- Department of Materials, Textiles and Chemical Engineering					
7	E078010	Technology and Environment	3			A:1	90
		Luc Martens -- Department of Information Technology					
8	E078752	Water and Air Quality Management	4			A:2	120
		Joris Thybaut -- Department of Materials, Textiles and Chemical Engineering					
9	E092100	Biosystems [nl]	3			A:1	90
		Pascal Verdonck -- Department of Electronics and Information Systems					
10	E075310	Ethics, Engineering and Society [nl]	3			A:2	90
		Seppe Segers -- Department of Philosophy and Moral Sciences					
11	E075060	Philosophy and Science [nl]	3			A:1	90
		Maarten Van Dyck -- Department of Philosophy and Moral Sciences					
12	E076320	The Information Society and ICT [nl]	3			A:1	90
		Erik Mannens -- Department of Electronics and Information Systems					
13	A001900	Introduction to Psychology [nl]	3			A:1	90
		Wim Notebaert -- Department of Experimental Psychology					
14	H001977	Coaching and Diversity [nl]	3	UKV		A:J	90
		Elisabeth De Schauwer -- Department of Special Education					
15	A005503	Context and Nuance. A Critical Reflection on Current Topics [nl]	6	UKV		A:1	180
		Stef Craps -- Department of Literary Studies					
16	E076450	Basic Entrepreneurship [nl]	3	UKV		A:1	90
		Yannick Dillen -- Department of Marketing, Innovation and Organisation					
17	E076431	Introduction to Entrepreneurship	3			A:1	90
		Petra Andries -- Department of Marketing, Innovation and Organisation					
18	E076460	Dare to Venture	4			A:2	120
		Johan Verrue -- Department of Marketing, Innovation and Organisation					
19	E076471	Dare to Start	3			A:2	90
		Frank Gielen -- Department of Information Technology					
20	E076621	Principles of Law and Construction Law [nl]	3			A:1	90
		Jelle Laverge -- Department of Architecture and Urban Planning					
21	E076520	Commercial Law [nl]	3			A:1	90
		Diederik Bruloot -- Department of Interdisciplinary Study of Law, Private Law and Business Law					
22	E076951	Engineering Economy	6			A:1	180
		Sofie Verbrugge -- Department of Information Technology					
23	H002169	Powerful Learning Environments [nl]	6			A:1	180
		Bram De Wever -- Department of Educational Studies					
24	H002196	Classroom Management and Reflection [nl]	4			A:2	120
		Melissa Tuytens -- Department of Educational Studies					
25	H002197	The Teacher within School and Society [nl]	4			A:1	120
		Melissa Tuytens -- Department of Educational Studies					
26	H002198	Psychology of Adolescence [nl]	4			A:1	120
		Wim Beyers -- Department of Developmental, Personality and Social Psychology					
27	F000083	Macroeconomics [nl]	6			A:1	180
		Freddy Heylen -- Department of Economics					
28	H001010	Introduction Industrial Psychology [nl]	5			Z:1	150
		Bart Wille -- Department of Developmental, Personality and Social Psychology					
29	F000551	Business Skills	4			C:2	120
		Mieke Audenaert -- Department of Marketing, Innovation and Organisation					
30	A003001	Academic English	3	UKV		B:1, A:2	90
		Geert Jacobs -- Department of Linguistics					
31	E075800	Communication [nl]	3			A:1	90
		Leen Pollefliet -- Department of Information Technology					

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 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 2024-2025	f: annually, from 2025-2026	i: annually, from 2026-2027
b: tri-annually	d: bi-annually, from 2024-2025	g: bi-annually, from 2025-2026	j: bi-annually, from 2026-2027
	e: tri-annually, from 2024-2025	h: tri-annually, from 2025-2026	k: tri-annually, from 2026-2027