GHENT UNIVERSITY

Study Programme

Academic year 2023-2024

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

2 Courses Related to the Main Subject 36 credits

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

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] *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	E078752	Water and Air Quality Management *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] *Seppe Segers -- 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 [nl] *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] *Stef Craps -- 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
22	E076951	Engineering Economy *Sofie Verbrugge -- Department of Information Technology*	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			Z:1	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

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

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

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

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

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 *Birger Raa -- Department of Industrial Systems Engineering and Product Design*	6	a		A:1	180
2	E076380	Methods Engineering and Work Measurement *Dieter Claeys -- Department of Industrial Systems Engineering and Product Design*	6	a		A:2	180
3	E060240	Quality Engineering and Industrial Statistics *Stijn De Vuyst -- Department of Industrial Systems Engineering and Product Design*	6	a		A:2	180

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

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

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

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

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

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

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 *René Bos -- Department of Materials, Textiles and Chemical Engineering*	6			B:1	180
2	E071200	Unit Operations in Chemical Industry *Geraldine Heynderickx -- Department of Materials, Textiles and Chemical Engineering*	6			B:1	180
3	E045910	Heat Engineering and Mass Transport [nl] *Geraldine Heynderickx -- Department of Materials, Textiles and Chemical Engineering*	6			A:1	180

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

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

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

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

6	E030520	Power Electronics *Hendrik Vansompel -- Department of Electromechanical, Systems and Metal Engineering*	3			A:2	90
7	E005722	Modelling and Simulation of Dynamical Systems *Guillaume Crevecoeur -- Department of Electromechanical, Systems and Metal Engineering*	6			A:2	180

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

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

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] *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	E078752	Water and Air Quality Management *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] *Seppe Segers -- 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 [nl] *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] *Stef Craps -- 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
22	E076951	Engineering Economy *Sofie Verbrugge -- Department of Information Technology*	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			Z:1	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

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