

Faculty of Engineering and Architecture
Master of Science in Engineering Physics

Language of instruction: Dutch

Programme version 14

1 General Courses 48 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E026221 Plasma Physics Geert Verdoolaeghe -- Department of Applied Physics	6		1	B:1	180
2	E002683 Mathematical Techniques for Engineers: Advanced Topics Marcelo Gonçalves De Martino -- Department of Electronics and Information Systems	6		1	B:1	180
3	E025010 Atomic and Molecular Physics Veronique Van Speybroeck -- Department of Applied Physics	6		1	B:1	180
4	E022700 Computational Solutions of Wave Problems Dick Botteldooren -- Department of Information Technology	6		1	B:1	180
5	E025600 Nuclear Physics: Principles and Applications Matthieu Boone -- Department of Physics and Astronomy	6		1	B:2	180
6	E029040 Physical Chemistry Iwan Moreels -- Department of Chemistry	6		1	A:2	180
7	E024641 Physics of Semiconductor Devices Benoit Bakeroot -- Department of Electronics and Information Systems	6		1	A:2	180
8	E025700 Engineering Physics and Industry Filip Beunis -- Department of Electronics and Information Systems	6		1	B:2	180

2 Elective Courses 48 credits

Subscribe to 48 credit units from 3 modules from the following list. Subject to approval by the faculty.

- 12 credit units in year 1,

- 36 credit units in year 2.

2.1 Elective Courses Master of Engineering Physics 30 credits

Subscribe to 30 credit units from the following list. Subject to approval by the faculty.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E006800 Modelling and Engineering of Nanoscale Materials Louis Vanduyfhuys -- Department of Applied Physics	6			B:1	180
2	E006600 Multiscale and Multiphysics Modelling Techniques for Nanoelectronic Devices Dries Vande Ginste -- Department of Information Technology	6			B:2	180
3	E006900 Plasma Technology and Fusion Technology Rino Morent -- Department of Applied Physics	6			B:1	180
4	E006700 Thin Films: Physics and Technology Diederik Depla -- Department of Solid State Sciences	6			B:1	180
5	E006500 Quantum Optics Bart Kuyken -- Department of Information Technology	6			B:1	180
6	E006400 Wave Physics in Living Matter Wout Joseph -- Department of Information Technology	6			B:2	180
7	C004106 Complexity and Criticality Jan Ryckebusch -- Department of Physics and Astronomy	6			B:2	180
8	E006200 Physics of Advanced Electronic and Photonic Devices Filip Strubbe -- Department of Electronics and Information Systems	6			B:1	180

2.2

Subscribe to 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	6			A:J	180
2	E098010 Integrated Portfolio [en, nl] Hiep Luong -- Department of Telecommunications and Information Processing	6			A:J	180
3	E098010 Integrated Portfolio [en, nl] Hiep Luong -- Department of Telecommunications and Information Processing	3			B:J	90
4	E037810 Safety of Electrical and Mechanical Installations Jos Knockaert -- Department of Electromechanical, Systems and Metal Engineering	3			A:2	90
5	E039060 Sustainable Energy and Rational Use of Energy [en] Jeroen Beeckman -- Department of Electronics and Information Systems	4			A:2	120
6	E078310 Sustainable Use of Materials: Metals Kim Verbeken -- Department of Materials, Textiles and Chemical Engineering	3			A:1	90
7	E078320 Sustainable Use of Materials: Plastics and Derived Materials Lode Daelemans -- Department of Materials, Textiles and Chemical Engineering	3			A:2	90
8	E078010 Technology and Environment [en] Luc Martens -- Department of Information Technology	3			A:1	90
9	E078752 Water and Air Quality Management [en] Joris Thybaut -- Department of Materials, Textiles and Chemical Engineering	4			A:2	120
10	E092100 Biosystems Pascal Verdonck -- Department of Electronics and Information Systems	3			A:1	90
11	E075310 Ethics, Engineering and Society Seppe Segers -- Department of Philosophy and Moral Sciences	3			A:2	90
12	C004009 History and Philosophy of Sciences Maarten Van Dyck -- Department of Philosophy and Moral Sciences	3			A:1	90
13	E076320 The Information Society and ICT Erik Mannens -- Department of Electronics and Information Systems	3			A:2	90
14	A001900 Introduction to Psychology Wim Notebaert -- Department of Experimental Psychology	3			A:1	90
15	H001977 Coaching and Diversity Elisabeth De Schauwer -- Department of Special Education	3	UKV		A:J	90
16	A005503 Context and Nuance. A Critical Reflection on Current Topics Stef Craps -- Department of Literary Studies	6	UKV		A:1	180
17	E076450 Basic Entrepreneurship	3	UKV		A:1	90
18	A005646 Introduction to Corporate Law Diederik Bruloot -- Department of Interdisciplinary Study of Law, Private Law and Business Law	3			A:1	90
19	E076460 Dare to Venture [en] Johan Verrue -- Department of Marketing, Innovation and Organisation	4			A:2	120
20	E076471 Dare to Start [en] Frank Gielen -- Department of Information Technology	3			A:2	90
21	E076621 Principles of Law and Construction Law Jelle Laverge -- Department of Architecture and Urban Planning	3			A:1	90
22	E076951 Engineering Economy [en] Sofie Verbrugge -- Department of Information Technology	6			A:1	180
23	E076431 Introduction to Entrepreneurship [en] Petra Andries -- Department of Marketing, Innovation and Organisation	3			A:1	90
24	H002169 Powerful Learning Environments Bram De Wever -- Department of Educational Studies	6			A:1	180
25	H002196 Classroom Management and Reflection Melissa Tuytens -- Department of Educational Studies	4			A:2	120
26	H002197 The Teacher within School and Society Melissa Tuytens -- Department of Educational Studies	4			A:1	120
27	H002198 Psychology of Adolescence Wim Beyers -- Department of Developmental, Personality and Social Psychology	4			A:1	120
28	F000083 Macroeconomics Freddy Heylen -- Department of Economics	6			A:1	180

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

2.3 Elective Courses Research Internship or Ghent University

12 credits

Subscribe to 12 credit units from no less than 1 and no more than 2 modules from the following list. Subject to approval by the faculty.

2.3.1 Elective Research Internship

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E099400 Research Internship [en] Patrick Segers -- Department of Electronics and Information Systems	6			A:J	180

2.3.2 Elective Courses Ghent University

Subscribe to no more than 12 credit units from the master's programmes offered by a bèta faculty of Ghent University, or from the Ghent University Elective Courses. Subject to approval by the faculty.
[Ghent University Elective Courses](#)

3 Master's Dissertation

24 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E091103 Master's Dissertation	24		2	A: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