Study Programme

Faculty of Engineering and Architecture

Master of Science in Engineering Physics

Language of instruction: English

Programme version 12

1 General Courses — 48 credits

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

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

2.2 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]	6			A:J	180
		Patrick Segers -- Department of Electronics and Information Systems					
2	E098010	Integrated Portfolio [en, nl]	6			A:J	180
		Hiep Luong -- Department of Telecommunications and Information Processing					
3	E098010	Integrated Portfolio [en, nl]	3			B:J	90
		Hiep Luong -- Department of Telecommunications and Information Processing					
4	E037810	Safety of Electrical and Mechanical Installations [nl]	3			A:2	90
		Jos Knockaert -- Department of Electromechanical, Systems and Metal Engineering					
5	E039060	Sustainable Energy and Rational Use of Energy	4			A:2	120
		Filip Strubbe -- Department of Electronics and Information Systems					
6	E078310	Sustainable Use of Materials: Metals [nl]	3			A:1	90
		Kim Verbeken -- Department of Materials, Textiles and Chemical Engineering					
7	E078320	Sustainable Use of Materials: Plastics and Derived Materials [nl]	3			A:2	90
		Lode Daelemans -- Department of Materials, Textiles and Chemical Engineering					
8	E078010	Technology and Environment	3			A:1	90
		Luc Martens -- Department of Information Technology					
9	E078752	Water and Air Quality Management	4			A:2	120
		Joris Thybaut -- Department of Materials, Textiles and Chemical Engineering					
10	E092100	Biosystems [nl]	3			A:1	90
		Pascal Verdonck -- Department of Electronics and Information Systems					
11	E075310	Ethics, Engineering and Society [nl]	3			A:2	90
		Seppe Segers -- Department of Philosophy and Moral Sciences					
12	C004009	History and Philosophy of Sciences [nl]	3			B:2	90
		Maarten Van Dyck -- Department of Philosophy and Moral Sciences					
13	E076321	Digital Innovation for People and Society [nl]	3			A:2	90
14	A001900	Introduction to Psychology [nl]	3			A:1	90
		Wim Notebaert -- Department of Experimental Psychology					
15	H001977	Coaching and Diversity [nl]	3	UKV		A:J	90
		Elisabeth De Schauwer -- Department of Special Education					
16	A005503	Context and Nuance. A Critical Reflection on Current Topics [nl]	6	UKV		A:1	180
		July De Wilde -- Department of Translation, Interpreting and Communication					
17	F001021	Basic Entrepreneurship [nl]	3	UKV		A:1	90
		Evy Van Lancker -- Department of Marketing, Innovation and Organisation					
18	A005646	Introduction to Business Law [nl]	3			A:1	90
		Diederik Bruloot -- Department of Interdisciplinary Study of Law, Private Law and Business Law					
19	F001022	Dare to Venture	4			A:2	120
		Johan Verrue -- Department of Marketing, Innovation and Organisation					
20	E076471	Dare to Start	3			A:2	90
		Wouter Haerick -- Department of Information Technology					
21	E076621	Principles of Law and Construction Law [nl]	3			A:1	90
		Jelle Laverge -- Department of Architecture and Urban Planning					
22	E076951	Engineering Economy	6			A:1	180
		Sofie Verbrugge -- Department of Industrial Systems Engineering and Product Design					
23	F001020	Introduction to Entrepreneurship	3			A:1	90
		Petra Andries -- Department of Marketing, Innovation and Organisation					
24	H002476	Powerful Learning Environments [nl]	6			A:1	180
		Bram De Wever -- Department of Educational Studies					
25	H002477	The Teacher within Class, School and Society [nl]	6			A:2	180
		Melissa Tuytens -- Department of Educational Studies					
26	H002478	The Student: Development and Motivation [nl]	6			A:1	180
		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	H002668	Introduction Industrial Psychology [nl]	4			A:1	120
		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	E037830	Basics of Health and Safety at Work for Engineers [nl]	3			A:1	90
		Sofie Van Volsem -- Department of Industrial Systems Engineering and Product Design					

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	6			A:J	180
		Patrick Segers -- Department of Electronics and Information Systems					

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	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 2027-2028	f: annually, from 2028-2029	i: annually, from 2029-2030
b: tri-annually	d: bi-annually, from 2027-2028	g: bi-annually, from 2028-2029	j: bi-annually, from 2029-2030
	e: tri-annually, from 2027-2028	h: tri-annually, from 2028-2029	k: tri-annually, from 2029-2030