Study Programme

Academic year 2022-2023

Faculty of Engineering and Architecture

Master of Science in Engineering Physics

Language of instruction: English

Programme version 8

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
		Marcelo Gonçalves De Martino -- 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					

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

2.2 Elective Social Courses

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]	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	E078751	Water and Air Quality Engineering	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
		Guido Pennings -- 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	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
		Benjamin Biebuyck -- 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	E076930	Financial and Cost Price Reporting in Companies [nl]	6			A:1	180
		Faculteit Economie en Bedrijfskunde, Sophie Maussen -- Department of Accounting, Corporate Finance and Taxation					
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					

Nr	Course		CRDT	Ref	MT1	Session	Study
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

2.3 Elective Courses Ghent University   12 credits

12 elective credit units from the master's programmes from a betafaculty of Ghent University, or the Ghent University Elective Courses.
Subject to approval by the faculty.

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 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