

Faculty of Engineering and Architecture  
Master of Science in Engineering Physics

Language of instruction: English

Programme version 10

## 1 General Courses 48 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E026221 Plasma Physics Geert Verdoolaege -- Department of Applied Physics <a href="#">Indicative price: € 0</a>	6		1	A:1	180
2	E002683 Mathematical Techniques for Engineers: Advanced Topics Hendrik De Bie -- Department of Electronics and Information Systems <a href="#">Indicative price: € 0</a>	6		1	A:1	180
3	E025010 Atomic and Molecular Physics Veronique Van Speybroeck -- Department of Applied Physics <a href="#">Indicative price: € 10</a>	6		1	A:1	180
4	E022700 Computational Solutions of Wave Problems Dick Botteldooren -- Department of Information Technology <a href="#">Indicative price: € 500</a>	6		1	A:1	180
5	E025600 Nuclear Physics: Principles and Applications Matthieu Boone -- Department of Physics and Astronomy <a href="#">Indicative price: € 45</a>	6		1	A:2	180
6	E029040 Physical Chemistry Iwan Moreels -- Department of Chemistry <a href="#">Indicative price: € 0</a>	6		1	B:2	180
7	E024641 Physics of Semiconductor Devices Benoit Bakeroot -- Department of Electronics and Information Systems <a href="#">Indicative price: € 10</a>	6		1	B:2	180
8	E025700 Engineering Physics and Industry Filip Beunis -- Department of Electronics and Information Systems <a href="#">Indicative price: unknown</a>	6		1	A: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 <a href="#">Indicative price: € 0</a>	6			A:1	180
2	E006600 Multiscale and Multiphysics Modelling Techniques for Nanoelectronic Devices Dries Vande Ginste -- Department of Information Technology <a href="#">Indicative price: € 0</a>	6			A:2	180
3	E006900 Plasma Technology and Fusion Technology Rino Morent -- Department of Applied Physics <a href="#">Indicative price: unknown</a>	6			A:1	180

4	E006700	Thin Films: Physics and Technology Diederik Depla -- Department of Solid State Sciences <a href="#">Indicative price: € 0</a>	6		A:1	180
5	E006500	Quantum Optics Bart Kuyken -- Department of Information Technology <a href="#">Indicative price: € 0</a>	6		A:1	180
6	E006400	Wave Physics in Living Matter Wout Joseph -- Department of Information Technology <a href="#">Indicative price: € 0</a>	6		A:2	180
7	C004106	Complexity and Criticality Jan Ryckebusch -- Department of Physics and Astronomy <a href="#">Indicative price: € 0</a>	6		A:2	180
8	E006200	Physics of Advanced Electronic and Photonic Devices Filip Strubbe -- Department of Electronics and Information Systems <a href="#">Indicative price: € 0</a>	6		A:1	180

## 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] Patrick Segers -- Department of Electronics and Information Systems <a href="#">Indicative price: unknown</a>	6			A:J	180
2	E098010 Integrated Portfolio [en, nl] Hiep Luong -- Department of Telecommunications and Information Processing <a href="#">Indicative price: € 50</a>	6			A:J	180
3	E098010 Integrated Portfolio [en, nl] Hiep Luong -- Department of Telecommunications and Information Processing <a href="#">Indicative price: € 50</a>	3			B:J	90
4	E037810 Safety of Electrical and Mechanical Installations [nl] Jos Knockaert -- Department of Electromechanical, Systems and Metal Engineering <a href="#">Indicative price: unknown</a>	3			A:2	90
5	E039060 Sustainable Energy and Rational Use of Energy Jeroen Beeckman -- Department of Electronics and Information Systems <a href="#">Indicative price: € 7</a>	4			A:2	120
6	E078310 Sustainable Use of Materials: Metals [nl] Kim Verbeke -- Department of Materials, Textiles and Chemical Engineering <a href="#">Indicative price: € 8</a>	3			A:1	90
7	E078320 Sustainable Use of Materials: Plastics and Derived Materials [nl] Lode Daelemans -- Department of Materials, Textiles and Chemical Engineering <a href="#">Indicative price: € 0</a>	3			A:2	90
8	E078010 Technology and Environment Luc Martens -- Department of Information Technology <a href="#">Indicative price: € 0</a>	3			A:1	90
9	E078752 Water and Air Quality Management Joris Thybaut -- Department of Materials, Textiles and Chemical Engineering <a href="#">Indicative price: € 0</a>	4			A:2	120
10	E092100 Biosystems [nl] Pascal Verdonck -- Department of Electronics and Information Systems <a href="#">Indicative price: unknown</a>	3			A:1	90
11	E075310 Ethics, Engineering and Society [nl] Seppe Segers -- Department of Philosophy and Moral Sciences <a href="#">Indicative price: unknown</a>	3			A:2	90
12	C004009 History and Philosophy of Sciences [nl] Maarten Van Dyck -- Department of Philosophy and Moral Sciences <a href="#">Indicative price: € 0</a>	3			A:1 <sup>a</sup>	90
13	E076320 The Information Society and ICT [nl] Erik Mannens -- Department of Electronics and Information Systems <a href="#">Indicative price: unknown</a>	3			A:2	90

14	A001900	Introduction to Psychology [nl] Wim Notebaert -- Department of Experimental Psychology <a href="#">Indicative price: unknown</a>	3		A:1	90
15	H001977	Coaching and Diversity [nl] Elisabeth De Schauwer -- Department of Special Education <a href="#">Indicative price: € 0</a>	3	UKV	A:J	90
16	A005503	Context and Nuance. A Critical Reflection on Current Topics [nl] Stef Craps -- Department of Literary Studies <a href="#">Indicative price: € 0</a>	6	UKV	A:1	180
17	E076450	Basic Entrepreneurship [nl] Yannick Dillen -- Department of Marketing, Innovation and Organisation <a href="#">Indicative price: unknown</a>	3	UKV	A:1	90
18	A005646	Introduction to Corporate Law [nl] Diederik Bruloot -- Department of Interdisciplinary Study of Law, Private Law and Business Law <a href="#">Indicative price: unknown</a>	3		A:1	90
19	E076460	Dare to Venture Johan Verrue -- Department of Marketing, Innovation and Organisation <a href="#">Indicative price: unknown</a>	4		A:2	120
20	E076471	Dare to Start Wouter Haerick -- Department of Information Technology <a href="#">Indicative price: unknown</a>	3		A:2	90
21	E076621	Principles of Law and Construction Law [nl] Jelle Laverge -- Department of Architecture and Urban Planning <a href="#">Indicative price: unknown</a>	3		A:1	90
22	E076951	Engineering Economy Sofie Verbrugge -- Department of Information Technology <a href="#">Indicative price: € 60</a>	6		A:1	180
23	E076431	Introduction to Entrepreneurship Petra Andries -- Department of Marketing, Innovation and Organisation <a href="#">Indicative price: € 33</a>	3		A:1	90
24	H002169	Powerful Learning Environments [nl] Bram De Wever -- Department of Educational Studies <a href="#">Indicative price: € 50</a>	6		A:1	180
25	H002196	Classroom Management and Reflection [nl] Tijs Rotsaert -- Department of Educational Studies <a href="#">Indicative price: € 50</a>	4		A:2	120
26	H002197	The Teacher within School and Society [nl] Melissa Tuytens -- Department of Educational Studies <a href="#">Indicative price: € 50</a>	4		A:1	120
27	H002198	Psychology of Adolescence [nl] Wim Beyers -- Department of Developmental, Personality and Social Psychology <a href="#">Indicative price: € 51</a>	4		A:1	120
28	F000083	Macroeconomics [nl] Freddy Heylen -- Department of Economics <a href="#">Indicative price: € 65</a>	6		A:1	180
29	H001010	Introduction Industrial Psychology [nl] Bart Wille -- Department of Developmental, Personality and Social Psychology <a href="#">Indicative price: € 45</a>	5		A:2	150
30	F000551	Business Skills Mieke Audenaert -- Department of Marketing, Innovation and Organisation <a href="#">Indicative price: € 46</a>	4		C:2	120
31	A003001	Academic English Geert Jacobs -- Department of Linguistics <a href="#">Indicative price: € 0</a>	3	UKV	B:1, A:2	90
32	E075800	Communication [nl] Leen Pollefliet -- Department of Information Technology <a href="#">Indicative price: € 68</a>	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 Patrick Segers -- Department of Electronics and Information Systems <a href="#">Indicative price: unknown</a>	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 <a href="#">Indicative price: unknown</a>	24		2	B:J	720

### Programme related study costs

None

#### 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

#### Learning materials

The prices stated are indicative and subject to fluctuations.

The list of learning materials per course unit can be found in the course sheets.