

# Study Programme

Academic year 2026-2027

Faculty of Engineering and Architecture Master of Science in Engineering Physics

Language of instruction: English

Programme version 11

1	General	General Courses			48 credits		
Nr	Course		CRDT	Ref MT1	Session	Study	
1	E026221	Plasma Physics Geert Verdoolaege Department of Applied Physics	6	1	A:1	180	
2	E002683	Mathematical Techniques for Engineers: Advanced Topics Sigiswald Barbier Department of Electronics and Information Systems	6	1	A:1	180	
3	E025010	Atomic and Molecular Physics Veronique Van Speybroeck Department of Applied Physics	6	1	A:1	180	
4	E022700	Computational Solutions of Wave Problems  Dick Botteldooren Department of Information Technology	6	1	A:1	180	
5	E025600	Nuclear Physics: Principles and Applications  Matthieu Boone Department of Physics and Astronomy	6	1	A:2	180	
6	E029040	Physical Chemistry Iwan Moreels Department of Chemistry	6	1	B:2	180	
7	E024641	Physics of Semiconductor Devices  Benoit Bakeroot Department of Electronics and Information Systems	6	1	B:2	180	
8	E025700	Engineering Physics and Industry Filip Beunis Department of Electronics and Information Systems	6	1	A:2	180	

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

• 12 credit units in year 1

**Elective Courses** 

• 36 credit units in year 2

## 2.1 Elective Courses Master of Engineering Physics

30 credits

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

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## 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).

rule	a course fro	om 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 [nl]  Jos Knockaert Department of Electromechanical, Systems and Metal Engineering	3		A:2	90
5	E039060	Sustainable Energy and Rational Use of Energy Filip Strubbe Department of Electronics and Information Systems	4		A:2	120
6	E078310	Sustainable Use of Materials: Metals [nl]  Kim Verbeken Department of Materials, Textiles and Chemical Engineering	3		A:1	90
7	E078320	Sustainable Use of Materials: Plastics and Derived Materials [nl]  Lode Daelemans Department of Materials, Textiles and Chemical Engineering	3		A:2	90
8	E078010	Technology and Environment Luc Martens Department of Information Technology	3		A:1	90
9	E078752	Water and Air Quality Management  Joris Thybaut Department of Materials, Textiles and Chemical Engineering	4		A:2	120
10	E092100	Biosystems [nl] Pascal Verdonck Department of Electronics and Information Systems	3		A:1	90
11	E075310	Ethics, Engineering and Society [nl] Seppe Segers Department of Philosophy and Moral Sciences	3		A:2	90
12	C004009	History and Philosophy of Sciences [nl]  Maarten Van Dyck Department of Philosophy and Moral Sciences	3		B:2	90
13	E076320	The Information Society and ICT [nl]  Erik Mannens Department of Electronics and Information Systems	3		A:2	90
14	A001900	Introduction to Psychology [nl] Wim Notebaert Department of Experimental Psychology	3		A:1	90
15	H001977	Coaching and Diversity [nl]  Elisabeth De Schauwer Department of Special Education	3	UKV	A:J	90
16	A005503	Context and Nuance. A Critical Reflection on Current Topics [nl]  July De Wilde Department of Translation, Interpreting and Communication	6	UKV	A:1	180
17	F001021	Basic Entrepreneurship [nl]  Evy Van Lancker Department of Marketing, Innovation and Organisation	3	UKV	A:1	90
18	A005646	Introduction to Business Law [nl]  Diederik Bruloot Department of Interdisciplinary Study of Law, Private Law and Business Law	3		A:1	90
19	F001022	Dare to Venture  Johan Verrue Department of Marketing, Innovation and Organisation	4		A:2	120
20	E076471	Dare to Start Wouter Haerick Department of Information Technology	3		A:2	90
21	E076621	Principles of Law and Construction Law [nl]  Jelle Laverge Department of Architecture and Urban Planning	3		A:1	90
22	E076951	Engineering Economy Sofie Verbrugge Department of Information Technology	6		A:1	180
23	F001020	Introduction to Entrepreneurship Petra Andries Department of Marketing, Innovation and Organisation	3		A:1	90
24	H002476	Powerful Learning Environments [nl] Bram De Wever Department of Educational Studies	6		A:1	180
25	H002477	The Teacher within Class, School and Society [nl]  Melissa Tuytens Department of Educational Studies	6		A:2	180
26	H002478	The Student: Development and Motivation [nl] Wim Beyers Department of Developmental, Personality and Social Psychology	6		A:1	180

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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		C: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
32 E037830	Basics of Health and Safety at Work for Engineers [nl] Sofie Van Volsem Department of Industrial Systems Engineering and Product Design	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

Νı	r 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 beta 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 R	ef 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 b: tri-annually, from 2027-2028 h: tri-annually, from 2028-2029 k: tri-annually, from 2029-2030

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