

Faculty of Engineering and Architecture

Bridging Programme Master of Science in Engineering Physics

Language of instruction: English

Programme version 4

## 1 General Courses

1.1 Intake: Master of Science in Electrical Engineering, European Master of Science in Photonics, and Master of Science in Photonics Engineering 78 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E001810 Mathematical Tools in Engineering: Linear Algebra [nl] <i>Srdan Lazendic -- Department of Electronics and Information Systems</i>	3	BRUG	1	A:2	90
2	E001820 Mathematical Tools in Engineering: Complex Analysis [nl] <i>Srdan Lazendic -- Department of Electronics and Information Systems</i>	3	BRUG	1	A:1	90
3	E020310 Physics III [nl] <i>Louis Vanduyfhuys -- Department of Applied Physics</i>	6	BRUG	1	A:2	180
4	E022110 Electromagnetism I [nl] <i>Dries Vande Ginste -- Department of Information Technology</i>	6	BRUG	1	A:1	180
5	E023010 Quantum Mechanics I [nl] <i>Louis Vanduyfhuys -- Department of Applied Physics</i>	6	BRUG	1	A:2	180
6	E024610 Solid-state Physics and Semiconductors I [nl] <i>Henk Vrielinck -- Department of Solid State Sciences</i>	6	BRUG	1	A:1	180
7	E040050 Theoretical Mechanics I [nl] <i>Dimitri Van Neck -- Department of Physics and Astronomy</i>	6	BRUG	1	A:1	180
8	E024641 Physics of Semiconductor Devices <i>Benoit Bakeroot -- Department of Electronics and Information Systems</i>	6		1	B:2	180
9	E023060 Quantum Mechanics II [nl] <i>Veronique Van Speybroeck -- Department of Applied Physics</i>	6	BRUG	2	A:1	180
10	E026221 Plasma Physics <i>Geert Verdoolaege -- Department of Applied Physics</i>	6		2	A:1	180
11	E002683 Mathematical Techniques for Engineers: Advanced Topics <i>Sigiswald Barbier -- Department of Electronics and Information Systems</i>	6		2	A:1	180
12	E025010 Atomic and Molecular Physics <i>Veronique Van Speybroeck -- Department of Applied Physics</i>	6		2	A:1	180
13	E025600 Nuclear Physics: Principles and Applications <i>Matthieu Boone -- Department of Physics and Astronomy</i>	6		2	A:2	180
14	E029040 Physical Chemistry <i>Iwan Moreels -- Department of Chemistry</i>	6		2	B:2	180

1.2 Intake: Master of Science in Physics and Master of Science in Physics and Astronomy 72 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E002683 Mathematical Techniques for Engineers: Advanced Topics <i>Sigiswald Barbier -- Department of Electronics and Information Systems</i>	6		1	A:1	180
2	E007120 Modelling and Control of Dynamic Systems [nl] <i>Mia Loccupier -- Department of Electromechanical, Systems and Metal Engineering</i>	6	BRUG	1	A:2	180
3	E021110 Materials and Fields [nl] <i>Jeroen Beeckman -- Department of Electronics and Information Systems</i>	6	BRUG	1	A:1	180
4	E022110 Electromagnetism I [nl] <i>Dries Vande Ginste -- Department of Information Technology</i>	6	BRUG	1	A:1	180

5	E022700	Computational Solutions of Wave Problems <i>Dick Botteldooren -- Department of Information Technology</i>	6		1	A:1	180
6	E029040	Physical Chemistry <i>Iwan Moreels -- Department of Chemistry</i>	6		1	B:2	180
7	E030610	Photonics [nl] <i>Günther Roelkens -- Department of Information Technology</i>	6	BRUG	1	A:2	180
8	E032010	Electronic Systems and Instrumentation [nl] <i>Jan Doutreloigne -- Department of Electronics and Information Systems</i>	6	BRUG	1	A:2	180
9	E045120	Transport Phenomena [nl] <i>Tom De Mulder -- Department of Civil Engineering</i>	6	BRUG	1	B:2	180
10	E090320	Electrical Circuits and Networks [nl] <i>Inge Nys -- Department of Electronics and Information Systems</i>	6	BRUG	1	A:1	180
11	E026221	Plasma Physics <i>Geert Verdoolaege -- Department of Applied Physics</i>	6		2	A:1	180
12	E024641	Physics of Semiconductor Devices <i>Benoit Bakeroot -- Department of Electronics and Information Systems</i>	6		2	B:2	180

## 2 Elective Courses

Subscribe to 18 credit units (intake module 1.1) or 24 credits units (intake module 1.2) from the list Elective Courses Master of Engineering Physics in the Master of Science in Engineering Physics programme. 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 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 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