

Programme jointly offered by Ghent University, Vrije Universiteit Brussel
Bridging Programme Master of Science in Photonics Engineering

Language of instruction: English

Programme version 2

1 General Courses 70 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E001161 Mathematic Models <i>Karel Van Acoleyen -- Department of Electronics and Information Systems</i>	6	BRUG	1	A:1	180
2	E900039 Applied Electromagnetism [nl] <i>Dries Vande Ginste -- Department of Information Technology</i>	6	BRUG	1	A:1	180
3	E024800 Optical Materials <i>Kristiaan Neyts -- Department of Electronics and Information Systems</i>	6		1	A:1	180
4	E030660 Lasers <i>Geert Morthier -- Department of Information Technology</i>	4		1	A:1	120
5	E002640 Mathematics in Photonics <i>Peter Bienstman -- Department of Information Technology</i>	4		1	A:1	120
6	E030721 Laboratories in Photonics Research <i>Alberto Curto -- Department of Information Technology</i>	6		1	A:2	180
7	E007120 Modelling and Control of Dynamic Systems [nl] <i>Mia Loccuffier -- Department of Electromechanical, Systems and Metal Engineering</i>	6	BRUG	1	A:2	180
8	E030610 Photonics [nl] <i>Günther Roelkens -- Department of Information Technology</i>	6	BRUG	1	A:2	180
9	E012420 Optical Communication Systems <i>Geert Morthier -- Department of Information Technology</i>	6		1	A:2	180
10	E008446 Sensors, Actuators and Electronic Microsystems <i>Herbert De Smet -- Department of Electronics and Information Systems</i>	6		1	A:2	180
11	E031521 Physics of Semiconductor Technologies and Devices <i>Geert Van Steenberge -- Department of Electronics and Information Systems</i>	4		1	A:2	120
12	E030740 Recent Trends in Photonics <i>Wim Bogaerts -- Department of Information Technology</i>	4		2	A:1	120
13	E030761 Microphotonics <i>Dries Van Thourhout -- Department of Information Technology</i>	6		2	A:1	180

2 Elective Courses 20 credits

Subscribe to 20 credit units from 2 modules from the following list. Subject to approval by the faculty.

2.1 Advanced Courses Photonics 12 credits

Subscribe to 12 credit units from the following list. Subject to approval by the faculty.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E030961 Design of Refractive and Diffractive Optical Imaging Systems <i>Vrije Universiteit Brussel, Michael Vervaeke</i>	4			A:1	120
2	E027300 Optical Spectroscopy of Materials	4				120
3	E032411 Display Technology	4				120
4	E030920 Optical Sensors <i>Vrije Universiteit Brussel, Thomas Geernaert</i>	4			A:1	120
5	E900132 Photovoltaic Energy Conversion	4			A:2	120
6	E030630 High Speed Photonic Components <i>Geert Morthier -- Department of Information Technology</i>	4			A:1	120

7	E030930	Biophotonics <i>Nicolas Le Thomas -- Department of Information Technology</i>	4	A:1	120
8	E030881	Optical Design of Non-Imaging Systems with Ray-tracing Software <i>Vrije Universiteit Brussel, Wendy Meulebroeck</i>	4	A:1	120
9	E030890	Technological Processes for Photonics and Electronics: Laboratory <i>Günther Roelkens -- Department of Information Technology</i>	4	A:J	120
10	E023930	Quantum Optics <i>Guy Van Der Sande -- Vrije Universiteit Brussel</i>	4	A:2	120
11	E023940	Non-linear Optics <i>Bart Kuyken -- Department of Information Technology</i>	4	A:1	120
12	E030782	Micro- and Nanophotonic Semiconductor Devices <i>Dries Van Thourhout -- Department of Information Technology</i>	4	A:2	120
13	E901176	Introduction to Quantum Physics for Electrical Engineering <i>Vrije Universiteit Brussel, Guy Van Der Sande</i>	4	A:1	120
14	F000892	Innovation Management <i>Katrien Verleye -- Department of Marketing, Innovation and Organisation</i>	3	A:2	90
15	E030730	Lighting Technology <i>Vrije Universiteit Brussel, Lien Smeesters</i>	4	A:2	120
16	E030710	Research in Photonics <i>Yanlu Li -- Department of Information Technology</i>	6	A:1, B:2	150
17	E099221	Short Internship in Photonics <i>Geert Morthier -- Department of Information Technology</i>	5	A:J, B:1	150
18	E099232	Long Internship in Photonics <i>Jeroen Beeckman -- Department of Electronics and Information Systems</i>	10	A:J, B:1	300

2.2 Elective Courses Ghent University/VUB

8 credits

Subscribe to 8 credit units from the programmes of the Faculty of Engineering and Architecture (Ghent University) or the Faculty of Engineering (VUB). Subject to approval by the faculty.

3 Master's Dissertation

30 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E091106 Master's Dissertation <i>UGent - VUB</i>	30		2	A:J	900

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 2026-2027	f: annually, from 2027-2028	i: annually, from 2028-2029
b: tri-annually	d: bi-annually, from 2026-2027	g: bi-annually, from 2027-2028	j: bi-annually, from 2028-2029
	e: tri-annually, from 2026-2027	h: tri-annually, from 2027-2028	k: tri-annually, from 2028-2029