Study Programme

Academic year 2026-2027

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

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	4			A:1	120
		Michael Vervaeke -- Vrije Universiteit Brussel					
2	E027300	Optical Spectroscopy of Materials	4				120
3	E032411	Display Technology	4				120
4	E030920	Optical Sensors	4			A:2	120
		Thomas Geernaert -- Vrije Universiteit Brussel					
5	E900132	Photovoltaic Energy Conversion	4				120
6	E030630	High Speed Photonic Components	4				120

Nr	Course		CRDT	Ref	MT1	Session	Study
7	E030930	Biophotonics	4			A:1	120
		Nicolas Le Thomas -- Department of Information Technology					
8	E030881	Optical Design of Non-Imaging Systems with Ray-tracing Software	4			A:1	120
		Wendy Meulebroeck -- Vrije Universiteit Brussel					
9	E030890	Technological Processes for Photonics and Electronics: Laboratory	4			A:J	120
		Günther Roelkens -- Department of Information Technology					
10	E023930	Quantum Optics	4			A:2	120
		Guy Van Der Sande -- Vrije Universiteit Brussel					
11	E023940	Non-linear Optics	4			A:1	120
		Bart Kuyken -- Department of Information Technology					
12	E030782	Micro- and Nanophotonic Semiconductor Devices	4			A:2	120
		Dries Van Thourhout -- Department of Information Technology					
13	E901176	Introduction to Quantum Physics for Electrical Engineering	4			A:1	120
		Guy Van Der Sande -- Vrije Universiteit Brussel					
14	F000892	Innovation Management	3			A:2	90
		Katrien Verleye -- Department of Marketing, Innovation and Organisation					
15	E030730	Lighting Technology	4				120
		Lien Smeesters -- Vrije Universiteit Brussel					
16	E030710	Research in Photonics	6			A:1, B:2	150
		Yanlu Li -- Department of Information Technology					
17	E099221	Short Internship in Photonics	5			A:J, B:1	150
		Geert Morthier -- Department of Information Technology					
18	E099232	Long Internship in Photonics	10			A:J, B:1	300
		Jeroen Beeckman -- Department of Electronics and Information Systems					

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	30		2	A:J	900