

Study Programme

Academic year 2025-2026

Faculty of Engineering and Architecture

Master of Science in Electrical Engineering -- Communication and Information Technology

Language of instruction: English

Programme version 10

1 Genera	l Courses			36 (credits
Nr Course		CRDT F	Ref MT1	Session	Study
1 E022230	Antennas and Propagation Hendrik Rogier Department of Information Technology Indicative price: € 10	6	1	A:1	180
2 E031251	Design Methodology for FPGAs Dirk Stroobandt Department of Electronics and Information Systems Indicative price: € 0	6	1	A:1	180
3 E033021	Electromagnetic-aware High Frequency Design Hendrik Rogier Department of Information Technology Indicative price: € 10	6	1	A:1	180
4 E033640	High-speed Electronics Johan Bauwelinck Department of Information Technology Indicative price: € 15	6	1	A:2	180
5 E003600	Information Theory Heidi Steendam Department of Telecommunications and Information Processing Indicative price: € 13	6	1	B:2	180
6 E012130	Modulation and Detection Nele Noels Department of Telecommunications and Information Processing Indicative price: € 10	6	2	B:1	180
2 Courses	s Related to the Main Subject			48 (credits
Nr Course		CRDT F	Ref MT1	Session	Study
1 E019370	Robotics Tony Belpaeme Department of Electronics and Information Systems Indicative price: € 435	6	1	A:1	180
2 E012320	Mobile and Broadband Access Networks Ingrid Moerman Department of Information Technology Indicative price: € 30	6	1	B:2	180
3 E033702	Hardware-design Project Ioulia Tzouvadaki Department of Electronics and Information Systems Indicative price: € 0	6	1	A:2	180
	Ioulia Tzouvadaki Department of Electronics and Information Systems	6	2	A:2 A:1	180
4 E011322	Ioulia Tzouvadaki Department of Electronics and Information Systems Indicative price: € 0 Queueing Analysis and Simulation Joris Walraevens Department of Telecommunications and Information Processing		·		
4 E011322	Ioulia Tzouvadaki Department of Electronics and Information Systems Indicative price: € 0 Queueing Analysis and Simulation Joris Walraevens Department of Telecommunications and Information Processing Indicative price: € 10	6	·		
4 E011322 2.1 Master	Ioulia Tzouvadaki Department of Electronics and Information Systems Indicative price: € 0 Queueing Analysis and Simulation Joris Walraevens Department of Telecommunications and Information Processing Indicative price: € 10	6	2	A:1	180

Subscribe to 36 credit units from 1 path from the following list. Subject to approval by the faculty. Divided as:

3.1 Elective Courses: Path 1

36 credits

Subscribe to 36 credit units from no less than 2 and no more than 3 modules from the following list. Subject to approval by the faculty.

3.1.1 Elective Courses Communication and Information Technology

Subscribe to no less than 16 credit units from the following list. Subject to approval by the faculty. The Research Internship (E099400) cannot be combined with Industry Internship Engineering and Architecture (E099300).

Nr Course 1 E061330	Machine Learning	CRDT Ref MT1		Study 180
	Joni Dambre Department of Electronics and Information Systems Indicative price: $€$ 0			
2 E011610	Performance Analysis of Telecommunication Systems Sabine Witterrongel Department of Telecommunications and Information Processing Indicative price: € 6	4	A:1	120
3 E033620	High Frequency Systems Johan Bauwelinck Department of Information Technology Indicative price: € 12	6		180
4 E019170	Internet of Things Jeroen Hoebeke Department of Information Technology Indicative price: € 30	6	A:1	180
5 E010310	Image Processing [nl] Bart Goossens Department of Telecommunications and Information Processing Indicative price: € 12	6	A:1	180
6 E031440	VLSI Technology and Design Jan Doutreloigne Department of Electronics and Information Systems Indicative price: € 0	6	A:1	180
7 E003422	Fundamentals of Statistical Sensor Processing Hiep Luong Department of Telecommunications and Information Processing Indicative price: € 0	6	A:1	180
8 E033631	Applied High Frequency Design Guy Torfs Department of Information Technology Indicative price: € 0	6	A:1	180
9 E017930	Parallel and Distributed Software Systems Jan Fostier Department of Information Technology Indicative price: unknown	6	A:1	180
10 E003710	Game Theory and Multiagent Systems Heidi Steendam Department of Telecommunications and Information Processing Indicative price: € 0	6	A:1	180
11 E012802	Broadband cable-TV and in-home networks Margot Deruyck Department of Information Technology Indicative price: unknown	4	(A:1) ^d	120
12 E017920	Design of Multimedia Applications Glenn Van Wallendael Department of Electronics and Information Systems Indicative price: € 123	6	A:2	180
13 E030320	Avionics: Electronics Dries Vande Ginste Department of Information Technology Indicative price: € 0	4	A:2	120
14 E022020	Audio Engineering Dick Botteldooren Department of Information Technology Indicative price: € 0	4	A:2	120
15 E010220	Speech Processing Kris Demuynck Department of Electronics and Information Systems Indicative price: unknown	4	A:2	120
16 E004720	Network Modelling and Design Mario Pickavet Department of Information Technology Indicative price: € 30	4	B:2	120
17 E004120	Optimisation Techniques Ljubomir Jovanov Department of Telecommunications and Information Processing Indicative price: $\in \mathbb{O}$	6	A:2	180

18 E031341	Digital Building Blocks [nl] Jan Doutreloigne Department of Electronics and Information Systems Indicative price: € 50	6	A:2	180
19 E019130	Multimedia Techniques [nl] Peter Lambert Department of Electronics and Information Systems Indicative price: unknown	6	A:2	180
20 E022250	Bioelectromagnetism Wout Joseph Department of Information Technology Indicative price: € 0	4	B:2	120
21 E012420	Optical Communication Systems Geert Morthier Department of Information Technology Indicative price: € 100	6	A:2	180
22 E030220	Advanced Analog Design Guy Torfs Department of Information Technology Indicative price: € 10	6	A:1	180
23 E012210	Advanced Modulation and Coding Heidi Steendam Department of Telecommunications and Information Processing Indicative price: € 0	4	A:2	120
24 E034500	Sustainable Computing Lieven Eeckhout Department of Electronics and Information Systems Indicative price: € 0	3	A:2	90
25 E099400	Research Internship Patrick Segers Department of Electronics and Information Systems Indicative price: unknown	6	A:J	180

3.1.2 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).

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E099300	Industry Internship Engineering and Architecture [en, nl] Patrick Segers Department of Electronics and Information Systems Indicative price: unknown	6			A:J	180
2	E098010	Integrated Portfolio [en, nl] Hiep Luong Department of Telecommunications and Information Processing Indicative price: € 50	6			A:J	180
3	E098010	Integrated Portfolio [en, nl] Hiep Luong Department of Telecommunications and Information Processing Indicative price: € 50	3			B:J	90
4	E037810	Safety of Electrical and Mechanical Installations [nl] Jos Knockaert Department of Electromechanical, Systems and Metal Engineering Indicative price: € 30	3			A:2	90
5	E039060	Sustainable Energy and Rational Use of Energy Filip Strubbe Department of Electronics and Information Systems Indicative price: € 7	4			A:2	120
6	E078310	Sustainable Use of Materials: Metals [nl] Kim Verbeken Department of Materials, Textiles and Chemical Engineering Indicative price: € 8	3			A:1	90
7	E078320	Sustainable Use of Materials: Plastics and Derived Materials [nl] Lode Daelemans Department of Materials, Textiles and Chemical Engineering Indicative price: € 15	3			A:2	90
8	E078010	Technology and Environment Luc Martens Department of Information Technology Indicative price: € 0	3			A:1	90
9	E078752	Water and Air Quality Management Joris Thybaut Department of Materials, Textiles and Chemical Engineering Indicative price: € 0	4			A:2	120
10	E092100	Biosystems [nl] Pascal Verdonck Department of Electronics and Information Systems Indicative price: unknown	3			A:1	90

11 E	E075310	Ethics, Engineering and Society [nl] Seppe Segers Department of Philosophy and Moral Sciences Indicative price: unknown	3		A:2	90
12 C	004009	History and Philosophy of Sciences [nl] Maarten Van Dyck Department of Philosophy and Moral Sciences Indicative price: € 0	3		B:2	90
13 E	E076320	The Information Society and ICT [nl] Erik Mannens Department of Electronics and Information Systems Indicative price: unknown	3		A:2	90
14 A	A001900	Introduction to Psychology [nl] Wim Notebaert Department of Experimental Psychology Indicative price: unknown	3		A:1	90
15 H	1001977	Coaching and Diversity [nl] Elisabeth De Schauwer Department of Special Education Indicative price: € 0	3	UKV	A:J	90
16 A	A005503	Context and Nuance. A Critical Reflection on Current Topics [nl] July De Wilde Department of Translation, Interpreting and Communication Indicative price: € 0	6	UKV	A:1	180
17 F	F001021	Basic Entrepreneurship [nl] Evy Van Lancker Department of Marketing, Innovation and Organisation Indicative price: unknown	3	UKV	A:1	90
18 A	A005646	Introduction to Corporate Law [nl] Diederik Bruloot Department of Interdisciplinary Study of Law, Private Law and Business Law Indicative price: unknown	3		A:1	90
19 F	F001022	Dare to Venture Johan Verrue Department of Marketing, Innovation and Organisation Indicative price: unknown	4		A:2	120
20 E	E076471	Dare to Start Wouter Haerick Department of Information Technology Indicative price: unknown	3		A:2	90
21 E	076621	Principles of Law and Construction Law [nl] Jelle Laverge Department of Architecture and Urban Planning Indicative price: € 341	3		A:1	90
22 E	076951	Engineering Economy Sofie Verbrugge Department of Information Technology Indicative price: € 60	6		A:1	180
23 F	F001020	Introduction to Entrepreneurship Petra Andries Department of Marketing, Innovation and Organisation Indicative price: € 33	3		A:1	90
24 H	1002476	Powerful Learning Environments [nl] Bram De Wever Department of Educational Studies Indicative price: € 50	6		A:1	180
25 H	1002477	The Teacher within Class, School and Society [nl] Melissa Tuytens Department of Educational Studies Indicative price: € 50	6		A:2	180
26 H	1002478	The Student: Development and Motivation [nl] Wim Beyers Department of Developmental, Personality and Social Psychology Indicative price: € 75	6		A:1	180
27 F	F000083	Macroeconomics [nl] Freddy Heylen Department of Economics Indicative price: € 65	6		A:1	180
28 H	1001010	Introduction Industrial Psychology [nl] Bart Wille Department of Developmental, Personality and Social Psychology Indicative price: € 55	5		C:1	150
29 F	F000551	Business Skills Mieke Audenaert Department of Marketing, Innovation and Organisation Indicative price: € 46	4		C:2	120
30 A	A003001	Academic English Geert Jacobs Department of Linguistics Indicative price: € 0	3	UKV	B:1, A:2	90
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31 E075800	Communication [nl]	3	A:1	90
	Leen Pollefliet Department of Information Technology			
	Indicative price: € 68			
32 E037830	Basics of Health and Safety at Work for Engineers [nl]	3	A:1	90
	Sofie Van Volsem Department of Industrial Systems Engineering and Product Design			
	Indicative price: € 0			

36 credits

3.1.3 Elective Courses Ghent University

Subscribe to no more than 16 credit units from the programmes of Ghent University, including the Ghent University Elective Courses. Subject to approval by the faculty.

3.2 Elective Courses: Path 2

Subscribe to 36 credit units from 3 modules from the following list. Subject to approval by the faculty.

3.2.1 Elective Courses Communication and Information Technology

Subscribe to no less than 12 credit units from the following list. Subject to approval by the faculty. The Research Internship (E099400) cannot be combined with Industry Internship Engineering and Architecture (E099300).

Nr	Course	memorip (2000-000) curriet be combined with medally internallip Engin	CRDT Ref MT1	Session	Study
1	E061330	Machine Learning Joni Dambre Department of Electronics and Information Systems Indicative price: € 0	6	B:1	180
2	E011610	Performance Analysis of Telecommunication Systems Sabine Wittevrongel Department of Telecommunications and Information Processing Indicative price: € 6	4	A:1	120
3	E033620	High Frequency Systems Johan Bauwelinck Department of Information Technology Indicative price: € 12	6		180
4	E019170	Internet of Things Jeroen Hoebeke Department of Information Technology Indicative price: € 30	6	A:1	180
5	E010310	Image Processing [nl] Bart Goossens Department of Telecommunications and Information Processing Indicative price: € 12	6	A:1	180
6	E031440	VLSI Technology and Design Jan Doutreloigne Department of Electronics and Information Systems Indicative price: € 0	6	A:1	180
7	E003422	Fundamentals of Statistical Sensor Processing Hiep Luong Department of Telecommunications and Information Processing Indicative price: € 0	6	A:1	180
8	E033631	Applied High Frequency Design Guy Torfs Department of Information Technology Indicative price: € 0	6	A:1	180
9	E017930	Parallel and Distributed Software Systems Jan Fostier Department of Information Technology Indicative price: unknown	6	A:1	180
10	E003710	Game Theory and Multiagent Systems Heidi Steendam Department of Telecommunications and Information Processing Indicative price: € 0	6	A:1	180
11	E012802	Broadband cable-TV and in-home networks Margot Deruyck Department of Information Technology Indicative price: unknown	4	(A:1) ^d	120
12	E017920	Design of Multimedia Applications Glenn Van Wallendael Department of Electronics and Information Systems Indicative price: € 123	6	A:2	180
13	E030320	Avionics: Electronics Dries Vande Ginste Department of Information Technology Indicative price: € 0	4	A:2	120
14	E022020	Audio Engineering Dick Botteldooren Department of Information Technology Indicative price: € 0	4	A:2	120
15	E010220	Speech Processing Kris Demuynck Department of Electronics and Information Systems	4	A:2	120

	Indicative price: unknown			
16 E004720	Network Modelling and Design Mario Pickavet Department of Information Technology Indicative price: € 30	4	B:2	120
17 E004120	Optimisation Techniques Ljubomir Jovanov Department of Telecommunications and Information Processing Indicative price: \in 0	6	A:2	180
18 E031341	Digital Building Blocks [nl] Jan Doutreloigne Department of Electronics and Information Systems Indicative price: € 50	6	A:2	180
19 E019130	Multimedia Techniques [nl] Peter Lambert Department of Electronics and Information Systems Indicative price: unknown	6	A:2	180
20 E022250	Bioelectromagnetism Wout Joseph Department of Information Technology Indicative price: € 0	4	B:2	120
21 E012420	Optical Communication Systems Geert Morthier Department of Information Technology Indicative price: € 100	6	A:2	180
22 E030220	Advanced Analog Design Guy Torfs Department of Information Technology Indicative price: € 10	6	A:1	180
23 E012210	Advanced Modulation and Coding Heidi Steendam Department of Telecommunications and Information Processing Indicative price: € 0	4	A:2	120
24 E034500	Sustainable Computing Lieven Eeckhout Department of Electronics and Information Systems Indicative price: € 0	3	A:2	90
25 E099400	Research Internship Patrick Segers Department of Electronics and Information Systems Indicative price: unknown	6	A:J	180

3.2.2 Minors

Subscribe to at least 18 credit units from 1 minor from the following list. Subject to approval by the faculty.

3.2.2.1 Minor Operations Management

Subscribe to 18 credit units from the following list, with 6 credit units with reference a.

E076221 Manufacturing Planning and Control			MT1	Session	Study
Birger Raa Department of Industrial Systems Engineering and Product Design Indicative price: € 0	6	а		A:1	180
E004255 Operations Research Models and Methods El-Houssaine Aghezzaf Department of Industrial Systems Engineering and Product Design Indicative price: € 60	6			A:1	180
E060240 Quality Engineering and Industrial Statistics Stijn De Vuyst Department of Industrial Systems Engineering and Product Design Indicative price: € 50	6			A:2	180
E076951 Engineering Economy Sofie Verbrugge Department of Information Technology Indicative price: € 60	6			A:1	180

3.2.2.2 Minor Biosystems

Subscribe to 18 credit units from the following list, with no less than 8 credit units with reference a. Subject to approval by the faculty.

Nr	Course		CRDT	Ref MT1	Session	Study
1	E092623	Modelling of Physiological Systems Patrick Segers Department of Electronics and Information Systems Indicative price: € 80	5	a	A:2	150
2	E092662	From Genome to Organism Fransiska Malfait Department of Biomolecular Medicine Indicative price: unknown	3	a	A:1	90
3	E074011	Quantitative Cell and Tissue Analysis An Hendrix Department of Human Structure and Repair	6	а	A:1	180
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		<u>Indicative price: unknown</u>			
4	E063671	Biomaterials and Tissue Engineering Ruslan Dmitriev Department of Human Structure and Repair Indicative price: unknown	5	A:1	150
5	E063682	Biomechanics Charlotte Debbaut Department of Electronics and Information Systems Indicative price: ≤ 0	6	A:1	180
6	E010371	Medical Imaging Stefaan Vandenberghe Department of Electronics and Information Systems	6	A:1	180

3.2.2.3 Minor Photonics Engineering

Indicative price: unknown

Subscribe to no less than 18 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT Ref MT1	Session	Study
1	E030610	Photonics [nl] Günther Roelkens Department of Information Technology Indicative price: € 0	6	A:2	180
2	E030660	Lasers Geert Morthier Department of Information Technology Indicative price: € 10	4	A:1	120
3	E030761	Microphotonics Dries Van Thourhout Department of Information Technology Indicative price: € 10	6	A:1	180
4	E024800	Optical Materials Kristiaan Neyts Department of Electronics and Information Systems Indicative price: € 7	6	A:1	180
5	E008446	Sensors, Actuators and Electronic Microsystems Herbert De Smet Department of Electronics and Information Systems Indicative price: € 0	6	A:2	180
6	E030721	Laboratories in Photonics Research Alberto Curto Department of Information Technology Indicative price: € 0	6	A:2	180
7	E031521	Physics of Semiconductor Technologies and Devices Geert Van Steenberge Department of Electronics and Information Systems Indicative price: unknown	4	A:2	120

3.2.3 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).

ule a course f	rom the list below is followed).			
Vr Course		CRDT Ref MT1	Session	Study
1 E099300	Industry Internship Engineering and Architecture [en, nl] Patrick Segers Department of Electronics and Information Systems Indicative price: unknown	6	A:J	180
E098010	Integrated Portfolio [en, nl] Hiep Luong Department of Telecommunications and Information Processing Indicative price: € 50	6	A:J	180
E098010	Integrated Portfolio [en, nl] Hiep Luong Department of Telecommunications and Information Processing Indicative price: € 50	3	B:J	90
E037810	Safety of Electrical and Mechanical Installations [nl] Jos Knockaert Department of Electromechanical, Systems and Metal Engineering Indicative price: € 30	3	A:2	90
E039060	Sustainable Energy and Rational Use of Energy Filip Strubbe Department of Electronics and Information Systems Indicative price: € 7	4	A:2	120
E078310	Sustainable Use of Materials: Metals [nl] Kim Verbeken Department of Materials, Textiles and Chemical Engineering Indicative price: € 8	3	A:1	90
E078320	Sustainable Use of Materials: Plastics and Derived Materials [nl Lode Daelemans Department of Materials, Textiles and Chemical Engineering Indicative price: € 15] 3	A:2	90
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8 E078	Technology and Environment Luc Martens Department of Information Technology Indicative price: € 0	3	A:1	90
9 E078	Water and Air Quality Management Joris Thybaut Department of Materials, Textiles and Chemical Engineering Indicative price: € 0	4	A:2	120
10 E092	Pascal Verdonck Department of Electronics and Information Systems Indicative price: unknown	3	A:1	90
11 E075	10 Ethics, Engineering and Society [nl] Seppe Segers Department of Philosophy and Moral Sciences Indicative price: unknown	3	A:2	90
12 C004	History and Philosophy of Sciences [nl] Maarten Van Dyck Department of Philosophy and Moral Sciences Indicative price: € 0	3	B:2	90
13 E076	The Information Society and ICT [nl] Erik Mannens Department of Electronics and Information Systems Indicative price: unknown	3	A:2	90
14 A001	OO Introduction to Psychology [nl] Wim Notebaert Department of Experimental Psychology Indicative price: unknown	3	A:1	90
15 H001	77 Coaching and Diversity [nl] Elisabeth De Schauwer Department of Special Education Indicative price: € 0	3 UKV	/ A:J	90
16 A005	O3 Context and Nuance. A Critical Reflection on Current Topics [nl] July De Wilde Department of Translation, Interpreting and Communication Indicative price: € 0	6 UKV	/ A:1	180
17 F0010	21 Basic Entrepreneurship [nl] Evy Van Lancker Department of Marketing, Innovation and Organisation Indicative price: unknown	3 UKV	/ A:1	90
18 A005	Introduction to Corporate Law [nl] Diederik Bruloot Department of Interdisciplinary Study of Law, Private Law and Business Law Indicative price: unknown	3	A:1	90
19 F0010	Dare to Venture Johan Verrue Department of Marketing, Innovation and Organisation Indicative price: unknown	4	A:2	120
20 E076	71 Dare to Start Wouter Haerick Department of Information Technology Indicative price: unknown	3	A:2	90
21 E076	21 Principles of Law and Construction Law [nI] Jelle Laverge Department of Architecture and Urban Planning Indicative price: € 341	3	A:1	90
22 E076	51 Engineering Economy Sofie Verbrugge Department of Information Technology Indicative price: € 60	6	A:1	180
23 F0010	20 Introduction to Entrepreneurship Petra Andries Department of Marketing, Innovation and Organisation Indicative price: € 33	3	A:1	90
24 H002	Powerful Learning Environments [nl] Bram De Wever Department of Educational Studies Indicative price: € 50	6	A:1	180
25 H002	77 The Teacher within Class, School and Society [nl] **Melissa Tuytens Department of Educational Studies** Indicative price: € 50	6	A:2	180
26 H002	78 The Student: Development and Motivation [nl] Wim Beyers Department of Developmental, Personality and Social Psychology Indicative price: € 75	6	A:1	180
27 F000	Macroeconomics [nl] Freddy Heylen Department of Economics Indicative price: € 65	6	A:1	180
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28 H001010	Introduction Industrial Psychology [nl] Bart Wille Department of Developmental, Personality and Social Psychology Indicative price: € 55	5		C:1	150
29 F000551	Business Skills Mieke Audenaert Department of Marketing, Innovation and Organisation Indicative price: € 46	4		C:2	120
30 A003001	Academic English Geert Jacobs Department of Linguistics Indicative price: € 0	3	UKV	B:1, A:2	90
31 E075800	Communication [nl] Leen Pollefliet Department of Information Technology Indicative price: € 68	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 Indicative price: € 0	3		A:1	90

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 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 2026-2027 f: annually, from 2027-2028 i: annually, from 2028-2029 g: bi-annually, from 2027-2028 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

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.