GHENT UNIVERSITY

Study Programme

Academic year 2024-2025

Faculty of Engineering and Architecture

Master of Science in Computer Science Engineering

Language of instruction: English

Programme version 10

1 General Courses 60 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E034140	Parallel Computer Systems *Lieven Eeckhout -- Department of Electronics and Information Systems* Indicative price: € 0	6		1	A:1	180
2	E017930	Parallel and Distributed Software Systems *Filip De Turck -- Department of Information Technology* Indicative price: unknown	6		1	A:1	180
3	E017920	Design of Multimedia Applications *Glenn Van Wallendael -- Department of Electronics and Information Systems* Indicative price: € 123	6		1	A:2	180
4	E031710	Research Project *Joris Walraevens -- Department of Telecommunications and Information Processing* Indicative price: € 0	3		1	A:1	90
5	E033710	Design Project *Femke De Backere -- Department of Information Technology* Indicative price: € 50	9		1	A:J	270
6	E012320	Mobile and Broadband Access Networks *Ingrid Moerman -- Department of Information Technology* Indicative price: € 30	6		1	B:2	180
7	E003600	Information Theory *Heidi Steendam -- Department of Telecommunications and Information Processing* Indicative price: € 13	6		1	B:2	180
8	E011322	Queueing Analysis and Simulation *Joris Walraevens -- Department of Telecommunications and Information Processing* Indicative price: € 10	6		1	A:1	180
9	E061330	Machine Learning *Joni Dambre -- Department of Electronics and Information Systems* Indicative price: € 0	6		1	B:1	180
10	E019400	Information Security *Eric Laermans -- Department of Information Technology* Indicative price: € 80	6		1	B:2	180

2 Elective Courses 36 credits

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

2.1 Elective Path 1 36 credits

Subscribe to 36 credit units from no less than 1 and no more than 3 modules (2.1.1, 2.1.2, 2.1.3) from the following list. Subject to approval by the faculty.

2.1.1 Major, minor 18 credits

Subscribe to at least 1 major or minor from the following list. Subject to approval by the faculty.
Students can combine two majors of combine a major with a minor. A combination of two minors is not allowed.

2.1.1.1 Major Artificial Intelligence 18 credits

Subscribe to no less than 18 credit units from the following list, with no less than 12 credit units with reference a. Subject to approval by the faculty.

Students choosing the major AI, have to follow the course Artificial intelligence:
- either the course with course code E016330 for 6 credit units
- either the course with course code E016350, with 3 credit units in the Bachelor Computer Science Engineering, and 3 credit units in the Master Computer Science Engineering.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E061360	Reinforcement Learning *Pieter Simoens -- Department of Information Technology* Indicative price: € 0	6	a		A:1	180
2	E061341	Natural Language Processing *Chris Develder -- Department of Information Technology* Indicative price: € 0	6	a		A:2	180
3	E018230	Recommender Systems *Toon De Pessemier -- Department of Information Technology* Indicative price: € 0	6	a		A:2	180
4	E061350	Deep Generative Models *Bart Dhoedt -- Department of Information Technology* Indicative price: € 0	4	a		A:2	120
5	E016340	Probabilistic Graphical Models *Aleksandra Pizurica -- Department of Telecommunications and Information Processing* Indicative price: € 0	4	a		A:2	120
6	E061460	Computer Vision: Theory and Applications [nl] *Hiep Luong -- Department of Telecommunications and Information Processing* Indicative price: € 0	6	a		A:2	180
7	E019370	Robotics *Tony Belpaeme -- Department of Electronics and Information Systems* Indicative price: € 435	6			A:1	180
8	E031800	AI Research Seminar *Tijl De Bie -- Department of Electronics and Information Systems* Indicative price: unknown	3			A:1	90
9	E061370	Data Visualization for and with AI *Jefrey Lijffijt -- Department of Electronics and Information Systems* Indicative price: € 0	3			A:1	90
10	E018240	Big Data Technology *Dieter De Witte -- Department of Electronics and Information Systems* Indicative price: € 0	4			A:1	120
11	E018700	Data Quality *Antoon Bronselaer -- Department of Telecommunications and Information Processing* Indicative price: € 25	3			A:1	90
12	E003710	Game Theory and Multiagent Systems *Heidi Steendam -- Department of Telecommunications and Information Processing* Indicative price: € 0	6			A:1	180
13	E016360	Cognitive and Brain-Inspired Artificial Intelligence *Tony Belpaeme -- Department of Electronics and Information Systems* Indicative price: € 0	3			A:2	90
14	E010220	Speech Processing *Kris Demuynck -- Department of Electronics and Information Systems* Indicative price: unknown	4			A:2	120

2.1.1.2 Major Data Engineering — 18 credits

Subscribe to no less than 18 credit units from the following list, with 12 credit units with reference a. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E018610	Database Design [nl] *Guy De Tré -- Department of Telecommunications and Information Processing* Indicative price: € 52	4	a		A:1	120
2	E018240	Big Data Technology *Dieter De Witte -- Department of Electronics and Information Systems* Indicative price: € 0	4	a		A:1	120
3	E017310	Cloud Storage and Computing *Bruno Volckaert -- Department of Information Technology* Indicative price: € 0	4	a		A:2	120

4	E018250	Big Data Algorithms *Dieter De Witte -- Department of Electronics and Information Systems* Indicative price: € 0	3		A:2	90
5	E034150	Blockchain Technologies and Applications *Bjorn De Sutter -- Department of Electronics and Information Systems* Indicative price: € 0	3		A:1	90
6	E018700	Data Quality *Antoon Bronselaer -- Department of Telecommunications and Information Processing* Indicative price: € 25	3		A:1	90
7	E018130	NoSQL Databases *Antoon Bronselaer -- Department of Telecommunications and Information Processing* Indicative price: € 30	3		A:2	90
8	E018160	Knowledge Graphs *Pieter Colpaert -- Department of Electronics and Information Systems* Indicative price: unknown	3		A:2	90
9	E061370	Data Visualization for and with AI *Jefrey Lijffijt -- Department of Electronics and Information Systems* Indicative price: € 0	3		A:1	90

2.1.1.3 Major Cybersecurity — 18 credits

Subscribe to 18 credit units from the following list. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E017942	Software Hacking and Protection *Bjorn De Sutter -- Department of Electronics and Information Systems* Indicative price: € 0	6			A:1	180
2	E017950	Secure Software and Systems *Bart Coppens -- Department of Electronics and Information Systems* Indicative price: € 0	6			A:2	180
3	E008710	Network Security *Bruno Volckaert -- Department of Information Technology* Indicative price: € 0	6			A:1	180

2.1.1.4 Major Internet-of-Things / Robotics — 18 credits

Subscribe to no less than 18 credit units from the following list, with 12 credit units with reference a. Subject to approval by the faculty.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E019370	Robotics *Tony Belpaeme -- Department of Electronics and Information Systems* Indicative price: € 435	6	a		A:1	180
2	E019170	Internet of Things *Jeroen Hoebeke -- Department of Information Technology* Indicative price: € 30	6	a		A:1	180
3	E003422	Fundamentals of Statistical Sensor Processing *Hiep Luong -- Department of Telecommunications and Information Processing* Indicative price: € 0	6			A:1	180
4	E061670	Autonomous Vehicle Perception *Jan Aelterman -- Department of Telecommunications and Information Processing* Indicative price: € 0	3			A:2	90
5	E019380	Intelligent Robot Manipulation *Francis wyffels -- Department of Electronics and Information Systems* Indicative price: € 0	3			A:1	90
6	E033702	Hardware-design Project *Ioulia Tzouvadaki -- Department of Electronics and Information Systems* Indicative price: € 0	6			A:2	180
7	E032322	Sensor Based Measurement Systems *Herbert De Smet -- Department of Electronics and Information Systems* Indicative price: € 0	3			A:2	90
8	E003710	Game Theory and Multiagent Systems *Heidi Steendam -- Department of Telecommunications and Information Processing* Indicative price: € 0	6			A:1	180
9	E061380	Embedded Machine Learning *Adnan Shahid -- Department of Information Technology*	3			A:2	90

Indicative price: € 0

Nr	Course		CRDT	Ref	MT1	Session	Study
10	E031251	Design Methodology for FPGAs *Dirk Stroobandt -- Department of Electronics and Information Systems* Indicative price: € 0	6			A:1	180

2.1.1.5 Minor Operations Management — 18 credits

Subscribe to no less than 18 credit units from the following list, with 6 credit units with reference a.

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

2.1.1.6 Minor Biosystems — 18 credits

Subscribe to no less than 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 *Andre Skirtach -- Department of Biotechnology* Indicative price: unknown	6	a		A:1	180
4	E063671	Biomaterials and Tissue Engineering *Peter Dubruel -- Department of Organic Chemistry* 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* Indicative price: unknown	6			A:1	180

2.1.2 Elective Courses Computer Science Engineering — 18 credits

Subscribe to 18 credit units from the following list. Subject to approval by the faculty.
- The courses with reference 'AI' are from the major Artificial Intelligence
- The courses with reference 'DE' are from the major Data Engineering
- The courses with reference 'C' are from the major Cybersecurity
- The courses with reference 'IR' are from the major Internet-of-Things / robotics

Students can subscribe to a maximum of 6 ECTS credits internship (Research Internship E099400 and/or Industry Internship Engineering and Architecture E099300).

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E031251	Design Methodology for FPGAs *Dirk Stroobandt -- Department of Electronics and Information Systems* Indicative price: € 0	6	IR		A:1	180
2	E012130	Modulation and Detection *Nele Noels -- Department of Telecommunications and Information Processing* Indicative price: € 10	6			B:1	180
3	E030210	Analog Electronics [nl] *Jeroen De Maeyer -- Department of Electromechanical, Systems and Metal Engineering* Indicative price: € 12	6			A:1	180

4	E018520	Compilers *Bjorn De Sutter -- Department of Electronics and Information Systems* Indicative price: € 70	6		A:2	180
5	E010010	Signal Processing *Nilesh Madhu -- Department of Electronics and Information Systems* Indicative price: € 0	6		A:2	180
6	E012802	Broadband cable-TV and in-home networks *Margot Deruyck -- Department of Information Technology* Indicative price: unknown	4		A:1[a]	120
7	E010310	Image Processing [nl] *Wilfried Philips -- Department of Telecommunications and Information Processing* Indicative price: € 12	6		A:1	180
8	E011610	Performance Analysis of Telecommunication Systems *Sabine Wittevrongel -- Department of Telecommunications and Information Processing* Indicative price: € 6	4		A:1	120
9	C003241	Fundaments of Programming Languages [nl] *Christophe Scholliers -- Department of Mathematics, Computer Science and Statistics* Indicative price: € 0	6		A:1	165
10	E012210	Advanced Modulation and Coding *Heidi Steendam -- Department of Telecommunications and Information Processing* Indicative price: € 0	4		A:2	120
11	E016712	Computer Graphics *Danilo Babin -- Department of Telecommunications and Information Processing* Indicative price: € 0	6		A:2	180
12	E004720	Network Modelling and Design *Mario Pickavet -- Department of Information Technology* Indicative price: € 30	4		B:2	120
13	E004120	Optimisation Techniques *Ljubomir Jovanov -- Department of Telecommunications and Information Processing* Indicative price: € 0	6		A:2	180
14	C003349	Discrete Algorithms [nl] *Veerle Fack -- Department of Mathematics, Computer Science and Statistics* Indicative price: € 0	6		A:2	165
15	C003711	Computational Challenges in Bioinformatics *Peter Dawyndt -- Department of Mathematics, Computer Science and Statistics* Indicative price: € 0	6		A:2	180
16	E034500	Sustainable Computing *Lieven Eeckhout -- Department of Electronics and Information Systems* Indicative price: € 0	3		A:2	90
17	E061390	Quantum Computing: Architecture and Algorithms Indicative price: unknown	3			90
18	E061360	Reinforcement Learning *Pieter Simoens -- Department of Information Technology* Indicative price: € 0	6	AI	A:1	180
19	E061341	Natural Language Processing *Chris Develder -- Department of Information Technology* Indicative price: € 0	6	AI	A:2	180
20	E018230	Recommender Systems *Toon De Pessemier -- Department of Information Technology* Indicative price: € 0	6	AI	A:2	180
21	E061350	Deep Generative Models *Bart Dhoedt -- Department of Information Technology* Indicative price: € 0	4	AI	A:2	120
22	E016340	Probabilistic Graphical Models *Aleksandra Pizurica -- Department of Telecommunications and Information Processing* Indicative price: € 0	4	AI	A:2	120
23	E061460	Computer Vision: Theory and Applications [nl] *Hiep Luong -- Department of Telecommunications and Information Processing* Indicative price: € 0	6	AI	A:2	180

24	E019370	Robotics *Tony Belpaeme -- Department of Electronics and Information Systems* Indicative price: € 435	6	AI, IR	A:1	180
25	E031800	AI Research Seminar *Tijl De Bie -- Department of Electronics and Information Systems* Indicative price: unknown	3	AI	A:1	90
26	E061370	Data Visualization for and with AI *Jefrey Lijffijt -- Department of Electronics and Information Systems* Indicative price: € 0	3	AI	A:1	90
27	E018240	Big Data Technology *Dieter De Witte -- Department of Electronics and Information Systems* Indicative price: € 0	4	AI/DE	A:1	120
28	E018700	Data Quality *Antoon Bronselaer -- Department of Telecommunications and Information Processing* Indicative price: € 25	3	AI	A:1	90
29	E003710	Game Theory and Multiagent Systems *Heidi Steendam -- Department of Telecommunications and Information Processing* Indicative price: € 0	6	AI, IR	A:1	180
30	E016360	Cognitive and Brain-Inspired Artificial Intelligence *Tony Belpaeme -- Department of Electronics and Information Systems* Indicative price: € 0	3	AI	A:2	90
31	E010220	Speech Processing *Kris Demuynck -- Department of Electronics and Information Systems* Indicative price: unknown	4	AI	A:2	120
32	E018610	Database Design [nl] *Guy De Tré -- Department of Telecommunications and Information Processing* Indicative price: € 52	4	DE	A:1	120
33	E017310	Cloud Storage and Computing *Bruno Volckaert -- Department of Information Technology* Indicative price: € 0	4	DE	A:2	120
34	E018250	Big Data Algorithms *Dieter De Witte -- Department of Electronics and Information Systems* Indicative price: € 0	3	DE	A:2	90
35	E034150	Blockchain Technologies and Applications *Bjorn De Sutter -- Department of Electronics and Information Systems* Indicative price: € 0	3	DE	A:1	90
36	E018700	Data Quality *Antoon Bronselaer -- Department of Telecommunications and Information Processing* Indicative price: € 25	3	DE	A:1	90
37	E018130	NoSQL Databases *Antoon Bronselaer -- Department of Telecommunications and Information Processing* Indicative price: € 30	3	DE	A:2	90
38	E018160	Knowledge Graphs *Pieter Colpaert -- Department of Electronics and Information Systems* Indicative price: unknown	3	DE	A:2	90
39	E061370	Data Visualization for and with AI *Jefrey Lijffijt -- Department of Electronics and Information Systems* Indicative price: € 0	3	DE	A:1	90
40	E017942	Software Hacking and Protection *Bjorn De Sutter -- Department of Electronics and Information Systems* Indicative price: € 0	6	C	A:1	180
41	E017950	Secure Software and Systems *Bart Coppens -- Department of Electronics and Information Systems* Indicative price: € 0	6	C	A:2	180
42	E008710	Network Security *Bruno Volckaert -- Department of Information Technology* Indicative price: € 0	6	C	A:1	180
43	E019170	Internet of Things *Jeroen Hoebeke -- Department of Information Technology* Indicative price: € 30	6	IR	A:1	180

44	E003422	Fundamentals of Statistical Sensor Processing *Hiep Luong -- Department of Telecommunications and Information Processing* Indicative price: € 0	6	IR		A:1	180
45	E061670	Autonomous Vehicle Perception *Jan Aelterman -- Department of Telecommunications and Information Processing* Indicative price: € 0	3	IR		A:2	90
46	E019380	Intelligent Robot Manipulation *Francis wyffels -- Department of Electronics and Information Systems* Indicative price: € 0	3	IR		A:1	90
47	E033702	Hardware-design Project *Ioulia Tzouvadaki -- Department of Electronics and Information Systems* Indicative price: € 0	6	IR		A:2	180
48	E032322	Sensor Based Measurement Systems *Herbert De Smet -- Department of Electronics and Information Systems* Indicative price: € 0	3	IR		A:2	90
49	E061380	Embedded Machine Learning *Adnan Shahid -- Department of Information Technology* Indicative price: € 0	3	IR		A:2	90
50	E099400	Research Internship *Patrick Segers -- Department of Electronics and Information Systems* Indicative price: unknown	3	S		B:J	90
51	E099400	Research Internship *Patrick Segers -- Department of Electronics and Information Systems* Indicative price: unknown	6	S		A:J	180
52	E099300	Industry Internship Engineering and Architecture [en, nl] *Patrick Segers -- Department of Electronics and Information Systems* Indicative price: unknown	6	S		A:J	180
53	E098010	Integrated Portfolio [en, nl] *Hiep Luong -- Department of Telecommunications and Information Processing* Indicative price: € 50	6	S		A:J	180
54	E098010	Integrated Portfolio [en, nl] *Hiep Luong -- Department of Telecommunications and Information Processing* Indicative price: € 50	3	S		B:J	90

2.1.3 Elective Course Ghent University

Subscribe to no more than 9 credit units from the programmes of Ghent University, including the Ghent University Elective Courses.
Subject to approval by the faculty.

2.2 Elective Path 2 — 36 credits

Subscribe to 36 credit units from no less than 1 and no more than 2 elective modules from the following list. Subject to approval by the faculty.

2.2.1 Elective Courses Computer Science Engineering

Subscribe to no more than 36 credit units from the following list. Subject to approval by the faculty.
- The courses with reference 'AI' are from the major Artificial Intelligence
- The courses with reference 'DE' are from the major Data Engineering
- The courses with reference 'C' are from the major Cybersecurity
- The courses with reference 'IR' are from the major Internet-of-Things / robotics

Students can subscribe to a maximum of 6 ECTS credits internship (courses with reference S).

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E031251	Design Methodology for FPGAs *Dirk Stroobandt -- Department of Electronics and Information Systems* Indicative price: € 0	6	IR		A:1	180
2	E012130	Modulation and Detection *Nele Noels -- Department of Telecommunications and Information Processing* Indicative price: € 10	6			B:1	180
3	E030210	Analog Electronics [nl] *Jeroen De Maeyer -- Department of Electromechanical, Systems and Metal Engineering* Indicative price: € 12	6			A:1	180
4	E018520	Compilers *Bjorn De Sutter -- Department of Electronics and Information Systems* Indicative price: € 70	6			A:2	180

5	E010010	Signal Processing *Nilesh Madhu -- Department of Electronics and Information Systems* Indicative price: € 0	6		A:2	180
6	E012802	Broadband cable-TV and in-home networks *Margot Deruyck -- Department of Information Technology* Indicative price: unknown	4		A:1[a]	120
7	E010310	Image Processing [nl] *Wilfried Philips -- Department of Telecommunications and Information Processing* Indicative price: € 12	6		A:1	180
8	E011610	Performance Analysis of Telecommunication Systems *Sabine Wittevrongel -- Department of Telecommunications and Information Processing* Indicative price: € 6	4		A:1	120
9	C003241	Fundaments of Programming Languages [nl] *Christophe Scholliers -- Department of Mathematics, Computer Science and Statistics* Indicative price: € 0	6		A:1	165
10	E012210	Advanced Modulation and Coding *Heidi Steendam -- Department of Telecommunications and Information Processing* Indicative price: € 0	4		A:2	120
11	E016712	Computer Graphics *Danilo Babin -- Department of Telecommunications and Information Processing* Indicative price: € 0	6		A:2	180
12	E004720	Network Modelling and Design *Mario Pickavet -- Department of Information Technology* Indicative price: € 30	4		B:2	120
13	E004120	Optimisation Techniques *Ljubomir Jovanov -- Department of Telecommunications and Information Processing* Indicative price: € 0	6		A:2	180
14	C003349	Discrete Algorithms [nl] *Veerle Fack -- Department of Mathematics, Computer Science and Statistics* Indicative price: € 0	6		A:2	165
15	C003711	Computational Challenges in Bioinformatics *Peter Dawyndt -- Department of Mathematics, Computer Science and Statistics* Indicative price: € 0	6		A:2	180
16	E034500	Sustainable Computing *Lieven Eeckhout -- Department of Electronics and Information Systems* Indicative price: € 0	3		A:2	90
17	E061390	Quantum Computing: Architecture and Algorithms Indicative price: unknown	3			90
18	E061360	Reinforcement Learning *Pieter Simoens -- Department of Information Technology* Indicative price: € 0	6	AI	A:1	180
19	E061341	Natural Language Processing *Chris Develder -- Department of Information Technology* Indicative price: € 0	6	AI	A:2	180
20	E018230	Recommender Systems *Toon De Pessemier -- Department of Information Technology* Indicative price: € 0	6	AI	A:2	180
21	E061350	Deep Generative Models *Bart Dhoedt -- Department of Information Technology* Indicative price: € 0	4	AI	A:2	120
22	E016340	Probabilistic Graphical Models *Aleksandra Pizurica -- Department of Telecommunications and Information Processing* Indicative price: € 0	4	AI	A:2	120
23	E061460	Computer Vision: Theory and Applications [nl] *Hiep Luong -- Department of Telecommunications and Information Processing* Indicative price: € 0	6	AI	A:2	180
24	E019370	Robotics *Tony Belpaeme -- Department of Electronics and Information Systems* Indicative price: € 435	6	AI, IR	A:1	180

25	E031800	AI Research Seminar *Tijl De Bie -- Department of Electronics and Information Systems* Indicative price: unknown	3	AI	A:1	90
26	E061370	Data Visualization for and with AI *Jefrey Lijffijt -- Department of Electronics and Information Systems* Indicative price: € 0	3	AI	A:1	90
27	E018240	Big Data Technology *Dieter De Witte -- Department of Electronics and Information Systems* Indicative price: € 0	4	AI/DE	A:1	120
28	E018700	Data Quality *Antoon Bronselaer -- Department of Telecommunications and Information Processing* Indicative price: € 25	3	AI	A:1	90
29	E003710	Game Theory and Multiagent Systems *Heidi Steendam -- Department of Telecommunications and Information Processing* Indicative price: € 0	6	AI, IR	A:1	180
30	E016360	Cognitive and Brain-Inspired Artificial Intelligence *Tony Belpaeme -- Department of Electronics and Information Systems* Indicative price: € 0	3	AI	A:2	90
31	E010220	Speech Processing *Kris Demuynck -- Department of Electronics and Information Systems* Indicative price: unknown	4	AI	A:2	120
32	E018610	Database Design [nl] *Guy De Tré -- Department of Telecommunications and Information Processing* Indicative price: € 52	4	DE	A:1	120
33	E017310	Cloud Storage and Computing *Bruno Volckaert -- Department of Information Technology* Indicative price: € 0	4	DE	A:2	120
34	E018250	Big Data Algorithms *Dieter De Witte -- Department of Electronics and Information Systems* Indicative price: € 0	3	DE	A:2	90
35	E034150	Blockchain Technologies and Applications *Bjorn De Sutter -- Department of Electronics and Information Systems* Indicative price: € 0	3	DE	A:1	90
36	E018700	Data Quality *Antoon Bronselaer -- Department of Telecommunications and Information Processing* Indicative price: € 25	3	DE	A:1	90
37	E018130	NoSQL Databases *Antoon Bronselaer -- Department of Telecommunications and Information Processing* Indicative price: € 30	3	DE	A:2	90
38	E018160	Knowledge Graphs *Pieter Colpaert -- Department of Electronics and Information Systems* Indicative price: unknown	3	DE	A:2	90
39	E061370	Data Visualization for and with AI *Jefrey Lijffijt -- Department of Electronics and Information Systems* Indicative price: € 0	3	DE	A:1	90
40	E017942	Software Hacking and Protection *Bjorn De Sutter -- Department of Electronics and Information Systems* Indicative price: € 0	6	C	A:1	180
41	E017950	Secure Software and Systems *Bart Coppens -- Department of Electronics and Information Systems* Indicative price: € 0	6	C	A:2	180
42	E008710	Network Security *Bruno Volckaert -- Department of Information Technology* Indicative price: € 0	6	C	A:1	180
43	E019170	Internet of Things *Jeroen Hoebeke -- Department of Information Technology* Indicative price: € 30	6	IR	A:1	180
44	E003422	Fundamentals of Statistical Sensor Processing *Hiep Luong -- Department of Telecommunications and Information Processing* Indicative price: € 0	6	IR	A:1	180

45	E061670	Autonomous Vehicle Perception *Jan Aelterman -- Department of Telecommunications and Information Processing* Indicative price: € 0	3	IR		A:2	90
46	E019380	Intelligent Robot Manipulation *Francis wyffels -- Department of Electronics and Information Systems* Indicative price: € 0	3	IR		A:1	90
47	E033702	Hardware-design Project *Ioulia Tzouvadaki -- Department of Electronics and Information Systems* Indicative price: € 0	6	IR		A:2	180
48	E032322	Sensor Based Measurement Systems *Herbert De Smet -- Department of Electronics and Information Systems* Indicative price: € 0	3	IR		A:2	90
49	E061380	Embedded Machine Learning *Adnan Shahid -- Department of Information Technology* Indicative price: € 0	3	IR		A:2	90
50	E099400	Research Internship *Patrick Segers -- Department of Electronics and Information Systems* Indicative price: unknown	3	S		B:J	90
51	E099400	Research Internship *Patrick Segers -- Department of Electronics and Information Systems* Indicative price: unknown	6	S		A:J	180
52	E099300	Industry Internship Engineering and Architecture [en, nl] *Patrick Segers -- Department of Electronics and Information Systems* Indicative price: unknown	6	S		A:J	180
53	E098010	Integrated Portfolio [en, nl] *Hiep Luong -- Department of Telecommunications and Information Processing* Indicative price: € 50	6	S		A:J	180
54	E098010	Integrated Portfolio [en, nl] *Hiep Luong -- Department of Telecommunications and Information Processing* Indicative price: € 50	3	S		B:J	90

2.2.2 Elective Courses Ghent University

Subscribe to no more than 9 credit units from the programmes of Ghent University, including the Ghent University Elective Courses.
Subject to approval by the faculty.

3 Master's Dissertation 24 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E091103	Master's Dissertation Indicative price: unknown	24		2	B:J	720

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 2025-2026	f: annually, from 2026-2027	i: annually, from 2027-2028
b: tri-annually	d: bi-annually, from 2025-2026	g: bi-annually, from 2026-2027	j: bi-annually, from 2027-2028
	e: tri-annually, from 2025-2026	h: tri-annually, from 2026-2027	k: tri-annually, from 2027-2028

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.