GHENT UNIVERSITY

Study Programme

Academic year 2026-2027

Faculty of Engineering and Architecture

Master of Science in Computer Science Engineering

Language of instruction: English

Programme version 12

1 General Courses 66 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E017930	Parallel and Distributed Software Systems *Filip De Turck -- Department of Information Technology*	6		1	A:1	180
2	E031110	Digital Electronics *Dirk Stroobandt -- Department of Electronics and Information Systems*	6		1	B:1	180
3	E010311	Visual Computing *Bart Goossens -- Department of Telecommunications and Information Processing*	6		1	A:1	180
4	E031710	Research Project *Joris Walraevens -- Department of Telecommunications and Information Processing*	3		1	A:1	90
5	E017950	Secure Software and Systems *Bart Coppens -- Department of Electronics and Information Systems*	6		1	A:1	180
6	E003600	Information Theory *Heidi Steendam -- Department of Telecommunications and Information Processing*	6		1	B:2	180
7	E019400	Information Security *Eric Laermans -- Department of Information Technology*	6		1	B:2	180
8	E004122	Advanced Discrete Algorithms *Mario Pickavet -- Department of Information Technology*	6		1	A:2	180
9	E061335	Advanced Machine Learning *Tom Dhaene -- Department of Information Technology*	6		1	A:2	180
10	E033710	Design Project *Femke De Backere -- Department of Information Technology*	9		1	A:J	270
11	E034140	Parallel Computer Systems *Lieven Eeckhout -- Department of Electronics and Information Systems*	6		2	A:1	180

2 Elective Courses 30 credits

Subscribe to 30 credit units from at least 1 module from the following list. Subject to approval by the faculty.

2.1 Elective Courses Computer Science Engineering

Subscribe to no more than 30 credit units from the following list. Subject to approval by the faculty.
The courses are labeled according to research topic:

- reference 'AI' = Artificial Intelligence
- reference 'DE' = Data Engineering
- reference 'CS' = Cybersecurity
- reference 'IR' = 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), label S as reference.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	E061360	Reinforcement Learning *Pieter Simoens -- Department of Information Technology*	6	AI		A:2	180
2	E061341	Natural Language Processing *Chris Develder -- Department of Information Technology*	6	AI		A:2	180
3	E018230	Recommender Systems *Toon De Pessemier -- Department of Information Technology*	6	AI		A:2	180
4	E016341	Probabilistic Graphical Models *Aleksandra Pizurica -- Department of Telecommunications and Information Processing*	3	AI		A:2	90

5	E061460	Computer Vision: Theory and Applications [nl] *Hiep Luong -- Department of Telecommunications and Information Processing*	6	AI	A:2	180
6	E031800	AI Research Seminar *Tijl De Bie -- Department of Electronics and Information Systems*	3	AI	A:1	90
7	E003710	Game Theory and Multiagent Systems *Heidi Steendam -- Department of Telecommunications and Information Processing*	6	AI, IR	A:1	180
8	E016360	Cognitive and Brain-Inspired Artificial Intelligence *Tony Belpaeme -- Department of Electronics and Information Systems*	3	AI	A:2	90
9	E018700	Data Quality *Antoon Bronselaer -- Department of Telecommunications and Information Processing*	3	AI, DE	A:1	90
10	E018241	Big Data Technology *Pieter Colpaert -- Department of Electronics and Information Systems*	3	AI, DE	A:1	90
11	E018130	NoSQL Databases *Antoon Bronselaer -- Department of Telecommunications and Information Processing*	3	DE	A:2	90
12	E018160	Knowledge Graphs *Pieter Colpaert -- Department of Electronics and Information Systems*	3	DE	A:2	90
13	E017942	Software Hacking and Protection *Bjorn De Sutter -- Department of Electronics and Information Systems*	6	CS	A:1	180
14	E008711	Network Hacking and Protection *Bruno Volckaert -- Department of Information Technology*	6	CS	A:1	180
15	E019170	Internet of Things *Jeroen Hoebeke -- Department of Information Technology*	6	IR	A:1	180
16	E019370	Robotics *Tony Belpaeme -- Department of Electronics and Information Systems*	6	IR, AI	A:1	180
17	E003422	Fundamentals of Statistical Sensor Processing *Hiep Luong -- Department of Telecommunications and Information Processing*	6	IR	A:1	180
18	E061670	Autonomous Vehicle Perception *Jan Aelterman -- Department of Telecommunications and Information Processing*	3	IR	A:2	90
19	E019380	Intelligent Robot Manipulation *Francis wyffels -- Department of Electronics and Information Systems*	3	IR	A:1	90
20	E061380	Embedded Machine Learning *Adnan Shahid -- Department of Information Technology*	3	IR	A:2	90
21	E031251	Design Methodology for FPGAs *Dirk Stroobandt -- Department of Electronics and Information Systems*	6	IR	A:1	180
22	E033702	Hardware-design Project *Ioulia Tzouvadaki -- Department of Electronics and Information Systems*	6	IR	A:2	180
23	E018520	Compilers *Bjorn De Sutter -- Department of Electronics and Information Systems*	6		A:2	180
24	C003241	Fundaments of Programming Languages [nl] *Christophe Scholliers -- Department of Mathematics, Computer Science and Statistics*	6		A:1	165
25	E016712	Computer Graphics *Danilo Babin -- Department of Telecommunications and Information Processing*	6		A:2	180
26	E004721	Network Modelling [en, nl] *Mario Pickavet -- Department of Information Technology*	3		A:2	90
27	C003711	Computational Challenges in Bioinformatics *Jan Fostier -- Department of Information Technology*	6		A:2	180
28	E061390	Quantum Computing: Architecture and Algorithms *Alain Sarlette -- Department of Electronics and Information Systems*	3		A:1	90
29	E016210	Advanced Media Systems [en, nl] *Glenn Van Wallendael -- Department of Electronics and Information Systems*	3		A:2	90
30	E012321	Connected Systems *Jeroen Hoebeke -- Department of Information Technology*	6		A:2	180
31	E016220	Computer Simulation *Koen De Turck -- Department of Telecommunications and Information Processing*	3		A:1	90
32	E099400	Research Internship *Patrick Segers -- Department of Electronics and Information Systems*	3	S	B:J	90
33	E099400	Research Internship *Patrick Segers -- Department of Electronics and Information Systems*	6	S	A:J	180

34	E099300	Industry Internship Engineering and Architecture [en, nl] *Patrick Segers -- Department of Electronics and Information Systems*	6	S		A:J	180
35	E098010	Integrated Portfolio [en, nl] *Hiep Luong -- Department of Telecommunications and Information Processing*	6	S		A:J	180
36	E098010	Integrated Portfolio [en, nl] *Hiep Luong -- Department of Telecommunications and Information Processing*	3	S		B:J	90

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	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 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 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