

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 c | credits |
|---------|-------------------|---|------------|--------------|----------------|--------------|
| Nr 1 | Course E034140 | Parallel Computer Systems Lieven Eeckhout Department of Electronics and Information Systems | CRDT R | Ref MT1 1 | Session A:1 | Study 180 |
| 2 | E017930 | Parallel and Distributed Software Systems Filip De Turck Department of Information Technology | 6 | 1 | A:1 | 180 |
| 3 | E017920 | Design of Multimedia Applications Glenn Van Wallendael Department of Electronics and Information Systems | 6 | 1 | A:2 | 180 |
| 4 | E031710 | Research Project Joris Walraevens Department of Telecommunications and Information Process | 3 ssing | 1 | A:1 | 90 |
| 5 | E033710 | Design Project Femke De Backere Department of Information Technology | 9 | 1 | A:J | 270 |
| 6 | E012320 | Mobile and Broadband Access Networks Mario Pickavet Department of Information Technology | 6 | 1 | B:2 | 180 |
| 7 | E003600 | Information Theory Heidi Steendam Department of Telecommunications and Information Process | 6 sing | 1 | B:2 | 180 |
| 8 | E011322 | Queueing Analysis and Simulation Joris Walraevens Department of Telecommunications and Information Proces | 6 ssing | 1 | A:1 | 180 |
| 9 | E061330 | Machine Learning Joni Dambre Department of Electronics and Information Systems | 6 | 1 | B:1 | 180 |
| 10 | E019400 | Information Security Eric Laermans Department of Information Technology | 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

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

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 | 6 | а | | A:1 | 180 |
| 2 | E061341 | Natural Language Processing Chris Develder Department of Information Technology | 6 | а | | A:2 | 180 |
| 3 | E018230 | Recommender Systems Toon De Pessemier Department of Information Technology | 6 | а | | A:2 | 180 |

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| 2 | E061350 | Deep Generative Models Bart Dhoedt Department of Information Technology | 4 | а | A:2 | 120 |
|---|-----------|--|------------|---|-----|-----|
| 5 | 5 E016340 | Probabilistic Graphical Models Aleksandra Pizurica Department of Telecommunications and Information Proces | 4 ssing | а | A:2 | 120 |
| 6 | E061460 | Computer Vision: Theory and Applications [nl] Hiep Luong Department of Telecommunications and Information Processing | 6 | а | A:2 | 180 |
| 7 | E019370 | Robotics Tony Belpaeme Department of Electronics and Information Systems | 6 | | A:1 | 180 |
| 8 | B E031800 | AI Research Seminar Tijl De Bie Department of Electronics and Information Systems | 3 | | A:1 | 90 |
| ç | E061370 | Data Visualization for and with AI Jefrey Lijffijt Department of Electronics and Information Systems | 3 | | A:1 | 90 |
| 1 | 0 E018240 | Big Data Technology Dieter De Witte Department of Electronics and Information Systems | 4 | | A:1 | 120 |
| 1 | 1 E018700 | Data Quality Antoon Bronselaer Department of Telecommunications and Information Process | 3 sing | | A:1 | 90 |
| 1 | 2 E003710 | Game Theory and Multiagent Systems Heidi Steendam Department of Telecommunications and Information Processin | 6 g | | A:1 | 180 |
| 1 | 3 E016360 | Cognitive and Brain-Inspired Artificial Intelligence Tony Belpaeme Department of Electronics and Information Systems | 3 | | A:2 | 90 |
| 1 | 4 E010220 | Speech Processing Kris Demuynck Department of Electronics and Information Systems | 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 | 4 | а | | A:1 | 120 |
| 2 | E018240 | Big Data Technology Dieter De Witte Department of Electronics and Information Systems | 4 | а | | A:1 | 120 |
| 3 | E017310 | Cloud Storage and Computing Bruno Volckaert Department of Information Technology | 4 | а | | A:2 | 120 |
| 4 | E018250 | Big Data Algorithms Dieter De Witte Department of Electronics and Information Systems | 3 | | | A:2 | 90 |
| 5 | E034150 | Blockchain Technologies and Applications Bjorn De Sutter Department of Electronics and Information Systems | 3 | | | A:1 | 90 |
| 6 | E018700 | Data Quality Antoon Bronselaer Department of Telecommunications and Information Proc | 3 cessing | | | A:1 | 90 |
| 7 | E018130 | NoSQL Databases Antoon Bronselaer Department of Telecommunications and Information Proc | 3 cessing | | | A:2 | 90 |
| 8 | E018160 | Knowledge Graphs Pieter Colpaert Department of Electronics and Information Systems | 3 | | | A:2 | 90 |
| 9 | E061370 | Data Visualization for and with AI Jefrey Lijffijt Department of Electronics and Information Systems | 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 | 6 | A:1 | 180 |
| 2 | E017950 | Secure Software and Systems Bart Coppens Department of Electronics and Information Systems | 6 | A:2 | 180 |
| 3 | E008710 | Network Security Bruno Volckaert Department of Information Technology | 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 | 6 | а | A:1 | 180 |
| | | Tony Belpaeme Department of Electronics and Information Systems | | | | |

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| 2 E | 019170 | Internet of Things Jeroen Hoebeke Department of Information Technology | 6 | а | A:1 | 180 |
|------|--------|--|--------|---|-----|-----|
| 3 E | 003422 | Fundamentals of Statistical Sensor Processing Hiep Luong Department of Telecommunications and Information Processing | 6 | | A:1 | 180 |
| 4 E | 061670 | Autonomous Vehicle Perception Jan Aelterman Department of Telecommunications and Information Processing | 3 | | A:2 | 90 |
| 5 E | 019380 | Intelligent Robot Manipulation Francis wyffels Department of Electronics and Information Systems | 3 | | A:1 | 90 |
| 6 E | 033702 | Hardware-design Project Ioulia Tzouvadaki Department of Electronics and Information Systems | 6 | | A:2 | 180 |
| 7 E | 032322 | Sensor Based Measurement Systems Herbert De Smet Department of Electronics and Information Systems | 3 | | A:2 | 90 |
| 8 E | 003710 | Game Theory and Multiagent Systems Heidi Steendam Department of Telecommunications and Information Processing | 6 g | | A:1 | 180 |
| 9 E | 061380 | Embedded Machine Learning Adnan Shahid Department of Information Technology | 3 | | A:2 | 90 |
| 10 E | 031251 | Design Methodology for FPGAs Dirk Stroobandt Department of Electronics and Information Systems | 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 Des | 6 ign | а | | A:1 | 180 |
| 2 | E004255 | Operations Research Models and Methods El-Houssaine Aghezzaf Department of Industrial Systems Engineering and | 6 Product D | esign | | A:1 | 180 |
| 3 | E060240 | Quality Engineering and Industrial Statistics Stijn De Vuyst Department of Industrial Systems Engineering and Product I | 6 Design | | | A:2 | 180 |
| 4 | E076951 | Engineering Economy Sofie Verbrugge Department of Information Technology | 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 | 5 | а | | A:2 | 150 |
| 2 | E092662 | From Genome to Organism Fransiska Malfait Department of Biomolecular Medicine | 3 | а | | A:1 | 90 |
| 3 | E074011 | Quantitative Cell and Tissue Analysis Andre Skirtach Department of Biotechnology | 6 | а | | A:1 | 180 |
| 4 | E063671 | Biomaterials and Tissue Engineering Peter Dubruel Department of Organic Chemistry | 5 | | | A:1 | 150 |
| 5 | E063682 | Biomechanics Charlotte Debbaut Department of Electronics and Information Systems | 6 | | | A:1 | 180 |
| 6 | E010371 | Medical Imaging Stefaan Vandenberghe Department of Electronics and Information Systems | 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 'Al' 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).

| | 3 | | | | | |
|----|---------|--|---|----|---------|-------|
| Nr | | | | | Session | Study |
| 1 | E031251 | Design Methodology for FPGAs | 6 | IR | A:1 | 180 |
| | | Dirk Stroobandt Department of Electronics and Information Systems | | | | |
| 2 | E012130 | Modulation and Detection | 6 | | B:1 | 180 |
| | | Nele Noels Department of Telecommunications and Information Processing | | | | |

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| 3 | E030210 | Analog Electronics [nl] Jeroen De Maeyer Department of Electromechanical, Systems and Metal Engin | 6 eerin | g | A:1 | 180 |
|----|----------|--|------------|--------|------------------|-----|
| 4 | E018520 | Compilers Bjorn De Sutter Department of Electronics and Information Systems | 6 | | A:2 | 180 |
| 5 | E010010 | Signal Processing Nilesh Madhu Department of Electronics and Information Systems | 6 | | A:2 | 180 |
| 6 | E012802 | Broadband cable-TV and in-home networks Margot Deruyck Department of Information Technology | 4 | | A:1 ^a | 120 |
| 7 | E010310 | Image Processing [nl] Wilfried Philips Department of Telecommunications and Information Processing | 6 | | A:1 | 180 |
| 8 | E011610 | Performance Analysis of Telecommunication Systems Sabine Wittevrongel Department of Telecommunications and Information Proce | 4 ssing | | A:1 | 120 |
| 9 | C003241 | Fundaments of Programming Languages [nl] Christophe Scholliers Department of Applied Mathematics and Computer Science | 6 ce | | A:1 | 165 |
| 10 | E012210 | Advanced Modulation and Coding Heidi Steendam Department of Telecommunications and Information Processing | 4 g | | A:2 | 120 |
| 11 | E016712 | Computer Graphics Danilo Babin Department of Telecommunications and Information Processing | 6 | | A:2 | 180 |
| 12 | E004720 | Network Modelling and Design Mario Pickavet Department of Information Technology | 4 | | B:2 | 120 |
| 13 | E004120 | Optimisation Techniques Ljubomir Jovanov Department of Telecommunications and Information Processi | 6 ing | | A:2 | 180 |
| 14 | C003349 | Discrete Algorithms [nl] Veerle Fack Department of Applied Mathematics and Computer Science | 6 | | A:2 | 165 |
| 15 | C003711 | Computational Challenges in Bioinformatics Peter Dawyndt Department of Applied Mathematics and Computer Science | 6 | | A:2 | 180 |
| 16 | E034500 | Sustainable Computing Lieven Eeckhout Department of Electronics and Information Systems | 3 | | A:2 | 90 |
| 17 | E061390 | Quantum Computing: Architecture and Algorithms Koen Bertels Department of Electronics and Information Systems | 3 | | A:1 | 90 |
| 18 | E061360 | Reinforcement Learning Pieter Simoens Department of Information Technology | 6 | Al | A:1 | 180 |
| 19 | E061341 | Natural Language Processing Chris Develder Department of Information Technology | 6 | Al | A:2 | 180 |
| 20 | E018230 | Recommender Systems Toon De Pessemier Department of Information Technology | 6 | Al | A:2 | 180 |
| 21 | E061350 | Deep Generative Models Bart Dhoedt Department of Information Technology | 4 | Al | A:2 | 120 |
| 22 | E016340 | Probabilistic Graphical Models Aleksandra Pizurica Department of Telecommunications and Information Process | 4 ssing | Al | A:2 | 120 |
| 23 | E061460 | Computer Vision: Theory and Applications [nl] Hiep Luong Department of Telecommunications and Information Processing | 6 | Al | A:2 | 180 |
| 24 | E019370 | Robotics Tony Belpaeme Department of Electronics and Information Systems | 6 | AI, IR | A:1 | 180 |
| 25 | E031800 | Al Research Seminar Tijl De Bie Department of Electronics and Information Systems | 3 | Al | A:1 | 90 |
| 26 | E061370 | Data Visualization for and with AI Jefrey Lijffijt Department of Electronics and Information Systems | 3 | Al | A:1 | 90 |
| 27 | E018240 | Big Data Technology Dieter De Witte Department of Electronics and Information Systems | 4 | AI/DE | A:1 | 120 |
| 28 | E018700 | Data Quality Antoon Bronselaer Department of Telecommunications and Information Process | 3 sing | Al | A:1 | 90 |
| 29 | E003710 | Game Theory and Multiagent Systems Heidi Steendam Department of Telecommunications and Information Processing | 6 g | AI, IR | A:1 | 180 |
| 30 | E016360 | Cognitive and Brain-Inspired Artificial Intelligence Tony Belpaeme Department of Electronics and Information Systems | 3 | Al | A:2 | 90 |
| 31 | E010220 | Speech Processing Kris Demuynck Department of Electronics and Information Systems | 4 | Al | A:2 | 120 |
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| 32 | E018610 | Database Design [nl] Guy De Tré Department of Telecommunications and Information Processing | 4 | DE | A:1 | 120 |
|----|---------|--|-----------|----|-----|-----|
| 33 | E017310 | Cloud Storage and Computing Bruno Volckaert Department of Information Technology | 4 | DE | A:2 | 120 |
| 34 | E018250 | Big Data Algorithms Dieter De Witte Department of Electronics and Information Systems | 3 | DE | A:2 | 90 |
| 35 | E034150 | Blockchain Technologies and Applications Bjorn De Sutter Department of Electronics and Information Systems | 3 | DE | A:1 | 90 |
| 36 | E018700 | Data Quality Antoon Bronselaer Department of Telecommunications and Information Process | 3 sing | DE | A:1 | 90 |
| 37 | E018130 | NoSQL Databases Antoon Bronselaer Department of Telecommunications and Information Process | 3 sing | DE | A:2 | 90 |
| 38 | E018160 | Knowledge Graphs Pieter Colpaert Department of Electronics and Information Systems | 3 | DE | A:2 | 90 |
| 39 | E061370 | Data Visualization for and with Al Jefrey Lijffijt Department of Electronics and Information Systems | 3 | DE | A:1 | 90 |
| 40 | E017942 | Software Hacking and Protection Bjorn De Sutter Department of Electronics and Information Systems | 6 | С | A:1 | 180 |
| 41 | E017950 | Secure Software and Systems Bart Coppens Department of Electronics and Information Systems | 6 | С | A:2 | 180 |
| 42 | E008710 | Network Security Bruno Volckaert Department of Information Technology | 6 | С | A:1 | 180 |
| 43 | E019170 | Internet of Things Jeroen Hoebeke Department of Information Technology | 6 | IR | A:1 | 180 |
| 44 | E003422 | Fundamentals of Statistical Sensor Processing Hiep Luong Department of Telecommunications and Information Processing | 6 | IR | A:1 | 180 |
| 45 | E061670 | Autonomous Vehicle Perception Jan Aelterman Department of Telecommunications and Information Processing | 3 | IR | A:2 | 90 |
| 46 | E019380 | Intelligent Robot Manipulation Francis wyffels Department of Electronics and Information Systems | 3 | IR | A:1 | 90 |
| 47 | E033702 | Hardware-design Project Ioulia Tzouvadaki Department of Electronics and Information Systems | 6 | IR | A:2 | 180 |
| 48 | E032322 | Sensor Based Measurement Systems Herbert De Smet Department of Electronics and Information Systems | 3 | IR | A:2 | 90 |
| 49 | E061380 | Embedded Machine Learning Adnan Shahid Department of Information Technology | 3 | IR | A:2 | 90 |
| 50 | E099400 | Research Internship Patrick Segers Department of Electronics and Information Systems | 3 | S | B:J | 90 |
| 51 | E099400 | Research Internship Patrick Segers Department of Electronics and Information Systems | 6 | S | A:J | 180 |
| 52 | E099300 | Industry Internship Engineering and Architecture [en, nl] Patrick Segers Department of Electronics and Information Systems | 6 | S | A:J | 180 |
| 53 | E098010 | Integrated Portfolio [en, nl] Hiep Luong Department of Telecommunications and Information Processing | 6 | S | A:J | 180 |
| 54 | E098010 | Integrated Portfolio [en, nl] Hiep Luong Department of Telecommunications and Information Processing | 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 <u>Ghent University Elective Courses</u>. 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 'Al' 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

02-05-2024 20:45 p 5 Students can subscribe to a maximum of 6 ECTS credits internship (courses with reference S).

| 1 | Course E031251 | Design Methodology for FPGAs Dirk Stroobandt Department of Electronics and Information Systems | CRDT 6 | Ref MT1 IR | Session A:1 | Study 180 |
|----|----------------|--|--------------|---------------|------------------|--------------|
| 2 | E012130 | Modulation and Detection Nele Noels Department of Telecommunications and Information Processing | 6 | | B:1 | 180 |
| 3 | E030210 | Analog Electronics [nl] Jeroen De Maeyer Department of Electromechanical, Systems and Metal Engi | 6 neering | l | A:1 | 180 |
| 4 | E018520 | Compilers Bjorn De Sutter Department of Electronics and Information Systems | 6 | | A:2 | 180 |
| 5 | E010010 | Signal Processing Nilesh Madhu Department of Electronics and Information Systems | 6 | | A:2 | 180 |
| 6 | E012802 | Broadband cable-TV and in-home networks Margot Deruyck Department of Information Technology | 4 | | A:1 ^a | 120 |
| 7 | E010310 | Image Processing [nl] Wilfried Philips Department of Telecommunications and Information Processing | 6 | | A:1 | 180 |
| 8 | E011610 | Performance Analysis of Telecommunication Systems Sabine Wittevrongel Department of Telecommunications and Information Proce | 4 | | A:1 | 120 |
| 9 | C003241 | Fundaments of Programming Languages [nl] Christophe Scholliers Department of Applied Mathematics and Computer Scien | 6 | | A:1 | 165 |
| 10 | E012210 | Advanced Modulation and Coding Heidi Steendam Department of Telecommunications and Information Processin | 4 | | A:2 | 120 |
| 11 | E016712 | Computer Graphics Danilo Babin Department of Telecommunications and Information Processing | 6 | | A:2 | 180 |
| 12 | E004720 | Network Modelling and Design Mario Pickavet Department of Information Technology | 4 | | B:2 | 120 |
| 13 | E004120 | | 6 sing | | A:2 | 180 |
| 14 | C003349 | Discrete Algorithms [nl] Veerle Fack Department of Applied Mathematics and Computer Science | 6 | | A:2 | 165 |
| 15 | C003711 | Computational Challenges in Bioinformatics Peter Dawyndt Department of Applied Mathematics and Computer Science | 6 | | A:2 | 180 |
| 16 | E034500 | Sustainable Computing Lieven Eeckhout Department of Electronics and Information Systems | 3 | | A:2 | 90 |
| 17 | E061390 | Quantum Computing: Architecture and Algorithms Koen Bertels Department of Electronics and Information Systems | 3 | | A:1 | 90 |
| 18 | E061360 | Reinforcement Learning Pieter Simoens Department of Information Technology | 6 | Al | A:1 | 180 |
| 19 | E061341 | Natural Language Processing Chris Develder Department of Information Technology | 6 | Al | A:2 | 180 |
| 20 | E018230 | Recommender Systems Toon De Pessemier Department of Information Technology | 6 | Al | A:2 | 180 |
| 21 | E061350 | Deep Generative Models Bart Dhoedt Department of Information Technology | 4 | Al | A:2 | 120 |
| 22 | E016340 | Probabilistic Graphical Models Aleksandra Pizurica Department of Telecommunications and Information Process | 4 essing | Al | A:2 | 120 |
| 23 | E061460 | Computer Vision: Theory and Applications [nl] Hiep Luong Department of Telecommunications and Information Processing | 6 | Al | A:2 | 180 |
| 24 | E019370 | Robotics Tony Belpaeme Department of Electronics and Information Systems | 6 | AI, IR | A:1 | 180 |
| 25 | E031800 | Al Research Seminar Tijl De Bie Department of Electronics and Information Systems | 3 | Al | A:1 | 90 |
| 26 | E061370 | Data Visualization for and with AI Jefrey Lijffijt Department of Electronics and Information Systems | 3 | AI | A:1 | 90 |
| 27 | E018240 | Big Data Technology Dieter De Witte Department of Electronics and Information Systems | 4 | AI/DE | A:1 | 120 |
| 28 | E018700 | Data Quality Antoon Bronselaer Department of Telecommunications and Information Proces | 3 ssing | AI | A:1 | 90 |
| | | • | - | | | |

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| 29 | E003710 | Game Theory and Multiagent Systems Heidi Steendam Department of Telecommunications and Information Processing | 6 g | AI, IR | A:1 | 180 |
|----|---------|--|-----------|--------|-----|-----|
| 30 | E016360 | Cognitive and Brain-Inspired Artificial Intelligence Tony Belpaeme Department of Electronics and Information Systems | 3 | Al | A:2 | 90 |
| 31 | E010220 | Speech Processing Kris Demuynck Department of Electronics and Information Systems | 4 | Al | A:2 | 120 |
| 32 | E018610 | Database Design [nl] Guy De Tré Department of Telecommunications and Information Processing | 4 | DE | A:1 | 120 |
| 33 | E017310 | Cloud Storage and Computing Bruno Volckaert Department of Information Technology | 4 | DE | A:2 | 120 |
| 34 | E018250 | Big Data Algorithms Dieter De Witte Department of Electronics and Information Systems | 3 | DE | A:2 | 90 |
| 35 | E034150 | Blockchain Technologies and Applications Bjorn De Sutter Department of Electronics and Information Systems | 3 | DE | A:1 | 90 |
| 36 | E018700 | Data Quality Antoon Bronselaer Department of Telecommunications and Information Process | 3 sing | DE | A:1 | 90 |
| 37 | E018130 | NoSQL Databases Antoon Bronselaer Department of Telecommunications and Information Process | 3 sing | DE | A:2 | 90 |
| 38 | E018160 | Knowledge Graphs Pieter Colpaert Department of Electronics and Information Systems | 3 | DE | A:2 | 90 |
| 39 | E061370 | Data Visualization for and with Al Jefrey Lijffijt Department of Electronics and Information Systems | 3 | DE | A:1 | 90 |
| 40 | E017942 | Software Hacking and Protection Bjorn De Sutter Department of Electronics and Information Systems | 6 | С | A:1 | 180 |
| 41 | E017950 | Secure Software and Systems Bart Coppens Department of Electronics and Information Systems | 6 | С | A:2 | 180 |
| 42 | E008710 | Network Security Bruno Volckaert Department of Information Technology | 6 | С | A:1 | 180 |
| 43 | E019170 | Internet of Things Jeroen Hoebeke Department of Information Technology | 6 | IR | A:1 | 180 |
| 44 | E003422 | Fundamentals of Statistical Sensor Processing Hiep Luong Department of Telecommunications and Information Processing | 6 | IR | A:1 | 180 |
| 45 | E061670 | Autonomous Vehicle Perception Jan Aelterman Department of Telecommunications and Information Processing | 3 | IR | A:2 | 90 |
| 46 | E019380 | Intelligent Robot Manipulation Francis wyffels Department of Electronics and Information Systems | 3 | IR | A:1 | 90 |
| 47 | E033702 | Hardware-design Project Ioulia Tzouvadaki Department of Electronics and Information Systems | 6 | IR | A:2 | 180 |
| 48 | E032322 | Sensor Based Measurement Systems Herbert De Smet Department of Electronics and Information Systems | 3 | IR | A:2 | 90 |
| 49 | E061380 | Embedded Machine Learning Adnan Shahid Department of Information Technology | 3 | IR | A:2 | 90 |
| 50 | E099400 | Research Internship Patrick Segers Department of Electronics and Information Systems | 3 | S | B:J | 90 |
| 51 | E099400 | Research Internship Patrick Segers Department of Electronics and Information Systems | 6 | S | A:J | 180 |
| 52 | E099300 | Industry Internship Engineering and Architecture [en, nl] Patrick Segers Department of Electronics and Information Systems | 6 | S | A:J | 180 |
| 53 | E098010 | Integrated Portfolio [en, nl] Hiep Luong Department of Telecommunications and Information Processing | 6 | S | A:J | 180 |
| 54 | E098010 | Integrated Portfolio [en, nl] Hiep Luong Department of Telecommunications and Information Processing | 3 | S | B:J | 90 |
| _ | | | | | | |

2.2.2 Elective Courses Ghent University

Nr Course

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

| 3 Master's Dissertation | 24 credits |
|-------------------------|------------|
|-------------------------|------------|

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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 h: tri-annually, from 2026-2027 k: tri-annually, from 2027-2028

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