MASTER OF SCIENCE IN COMPUTER SCIENCE ENGINEERING

120 ECTS CREDITS - LANGUAGE: ENGLISH

The Faculty of Engineering and Architecture (FEA) offers most of its Engineering programmes at Master's level in English. This underlines the international ambition of the faculty, as well as the importance of an international education and multiple language skills for students.

WHAT

The Master of Science in Computer Science Engineering prepares students to develop innovative information technology solutions for real-world challenges. The program bridges the gap between theory and practice, preparing students to develop professional systems across a diverse range of domains, from energy-efficient mobile devices and embedded systems to massive data centers and high-performance supercomputers.
Graduates emerge with a comprehensive skill set that enables them to conceive, design, and manage sophisticated information-processing systems. This expertise is built upon a rigorous foundation of computer science and engineering principles, including artificial intelligence, machine learning, software engineering, and digital hardware design. Furthermore, the curriculum provides deep dives into critical fields such as cybersecurity, data engineering, visual computing, and digital communications.
To navigate the intricacies of modern technology, students learn to apply state-of-the-art models and methodologies. They are taught to look beyond pure technicality, integrating essential considerations such as customer requirements, environmental sustainability, economic feasibility, and ethical implications.
A hallmark of the program is its integration with world-class research. By collaborating closely with university laboratories and the renowned imec research institute, students participate in active research projects that sharpen their scientific inquiry and innovation skills. To ensure a well-rounded professional profile, the program also emphasizes transferable soft skills. Through consistent project-based learning, students master teamwork, effective communication, and project management, ensuring they are fully prepared for leadership roles in the global tech industry.

STRUCTURE

The Computer Science Engineering program is a comprehensive two-phase educational track. The first phase is a three-year program that culminates in the Bachelor's degree in Computer Science Engineering. This 180-credit Bachelor's program provides broad foundational training in science and engineering during the first year and a half before transitioning to a specialized focus on the fundamentals of computer science and engineering. Graduates of the Bachelor's degree are then qualified to access a range of Master's programs, including the two-year Master of Science in Computer Science Engineering.
The Master's curriculum is structured with a compulsory portion (66 ECTS credits) of mandatory course units and a flexible elective portion (54 ECTS credits) which features a twenty-four credit Master's dissertation and thirty credits worth of elective courses. These electives allow students to specialize in areas like Artificial Intelligence, Data Engineering, Cybersecurity, or Internet-of-Things/Robotics, giving expression to their personal interests. Students are also encouraged to pursue entrepreneurial interests by leveraging their project work to kickstart their own business through Gentrepreneur, a local student-entrepreneurship project, or they can opt to take a range of specialist course units as preparation for future doctoral studies.

LABOUR MARKET

Our program is designed to equip students with the skills necessary to design the intricate information processing systems that form the backbone of our modern society. Recognizing that information technology is fundamentally a means to an end, graduates are required to familiarize themselves with diverse application domains to ensure they can make optimal design decisions. While graduates typically commence their careers as system integrators, software developers, technical specialists or data engineers, their comprehensive education and proven ability to manage complex situations and demanding engineering tasks enable them to rapidly advance to higher-level roles, including those of designer, project leader, or director, ultimately preparing them to take on leading positions in industry and research institutions. They achieve this accelerated career progression because their education is rooted in a strong focus on fundamentals, ultimately preparing them to take on leading positions within society.

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TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

1 **Rechtstreeks:**
- Bachelor in de ingenieurswetenschappen, afstudeerrichting: computerwetenschappen
- Bachelor in de ingenieurswetenschappen: computerwetenschappen

2 **Rechtstreeks, na check door de inrichtende faculteit van formele toelatingsvereisten:**
- Bachelor in de informatica, met minor elektrotechniek en telecommunicatie
- Bachelor in de ingenieurswetenschappen, afstudeerrichting: computerwetenschappen, met nevenrichting elektrotechniek

3 **Na het met succes voltooien van een voorbereidingsprogramma:**

MAX 30 SP
- Bachelor in de computerwetenschappen

4 **Op voorwaarde van toelating door de inrichtende faculteit: na het met succes voltooien van een voorbereidingsprogramma:**

12 SP
- Bachelor in de informatica, met minor beveiliging en parallelle systemen

MAX 30 SP
- Bachelor in de informatica, met een andere minor dan elektrotechniek en telecommunicatie of zonder minor
- Bachelor in de ingenieurswetenschappen, afstudeerrichting: computerwetenschappen, met een andere nevenrichting dan elektrotechniek
- Bachelor in de ingenieurswetenschappen, afstudeerrichting: elektrotechniek, met nevenrichting computerwetenschappen

5 **Rechtstreekse toelating voor het volgen van een brugprogramma (horizontale instroom):**

a opleidingen nieuwe structuur:
- Master in de industriële wetenschappen: elektronica en ICT: multimedia en informatietechnologie
- Master in de industriële wetenschappen: elektronica en ICT: ICT
- Master in de industriële wetenschappen: elektronica-ICT, afstudeerrichting: ingebedde systemen
- Master in de industriële wetenschappen: informatica

b opleidingen oude structuur:
- Industrieel ingenieur in elektronica, optie informatie- en communicatietechnieken
- Industrieel ingenieur in informatica

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Students who wish to enrol for the Master of Science in Computer Science Engineering can enter the programme without any prerequisites if they hold the following diploma: an academic diploma of Bachelor (or Master) of Science in Engineering (university level, minimum three years), with the main subject in Computer Science Engineering and/or a Bachelor (or Master) of Science in Informatics or an equivalent to this.
Admission can only be granted after an individual application procedure. The Study Programme Committee will make the final decision whether to accept the application or not. The Study Programme Committee can decide that students need to follow a preparatory course or an individual master's programme, for instance for students with another diploma of Bachelor or Master.
Important: Students who wish to enrol must add the result of a GRE test to their application, more specifically the result of the Quantitative Reasoning of the General Test. The GRE test result will be assessed using the faculty's grading scale.
Information on admission requirements and the administrative procedure for admission on the basis of a diploma obtained abroad, can be found on the following page: www.ugent.be/prospect/en/administration/enrolment-or-registration.

LANGUAGE REQUIREMENTS

Language requirements	Dutch: no language requirements English: CEFR level B2

The language requirements for this study programme can be found on: www.ugent.be/languagerequirements

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PRACTICAL INFORMATION

Study programme

studiekiezer.ugent.be/master-of-science-in-computer-science-engineering-en/programma

Information sessions

EVOLV

evolv.gent/en/students/further-studies

Open Days

Each spring the graduation fair **EVOLV** organised by the UGent Association, offers the opportunity to discover all possible options to continue studying or to start looking for a job (with more than 200 different companies).
For some programmes, there is a specific **Open Day**. If so, it will be announced here (at the latest Feb 15th).15th).

23 April 2026 15u00 - 17u00 - Campus UFO, Ufo, Sint-Pietersnieuwstraat 33, 9000 Gent

Enrolling institution

Information on enrolment at Ghent University.

Application Deadline (for International degree students)

For students who **need a visa**: before 1st of April
For students who **do not need a visa**: before 1st of June
Read more

Tuition fee

More information is to be found on: www.ugent.be/tuitionfee

Learning path counsellor
studietrajectir.ea@ugent.be

Contact (for international degree students)
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