MASTER OF SCIENCE IN CIVIL ENGINEERING

MAJORS: DREDGING AND OFFSHORE ENGINEERING - CONSTRUCTION DESIGN
MINORS: OPERATIONS MANAGEMENT

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 Civil Engineering programme focuses on the study and design of buildings and structures (roads, bridges, hydraulic structures, high-rises and industrial buildings) and aims for the education of civil engineers who can perform at a high level in an international industrial and social environment. The programme concentrates on the thorough development of the conception and design capability, with the added objective of a job in Research and Development. For that purpose, the core curriculum has a pronounced emphasis on the computational aspects of buildings and infrastructure. By means of electives, students can choose to study additional aspects of the field corresponding to their personal aptitude and interests. These technical electives, as well as the societal electives aim to broaden the scope of the study programme.

STRUCTURE

In its entirely, the Civil Engineering programme consists of two phases: the first phase takes three years and leads to the academic Bachelor's degree of Engineering. The second phase takes two years and leads to the Master's degree Civil Engineering. In the course of the Master's programme students can opt for one of the two majors (Construction Design or Dredging and Offshore Engineering), providing a deepening scope.

> Construction Design

In the Construction Design major some specific engineering disciplines are refined. This gives the graduate the baggage to work in the construction industry, while at the same time having a broader and a more specialised technological knowledge. In particular, this set of course units focuses on the conceptual and computer-aided design of structures, structural stability, seismic design, spatial structures, glass and façade structures.

> Dredging and Offshore Engineering

The Dredging and Offshore Engineering major pursues a profound knowledge in the field of coastal and offshore engineering through a coherent set of course units that meets the requirements of the industry in this field. Given the enduring pressure on coastal regions worldwide, there is a sustained growth of coastal and offshore engineering constructional activities (e.g. sea defence, wind farms, platforms, land reclamation, artificial islands,...) and associated dredging activities. We address the basic knowledge of maritime technology (ship construction, stability and motions in harbours and approach channels), as well as cover the principles of dredging techniques with regard to dredging processes and soil mechanical aspects. We also teach a deeper understanding and modelling of hydrodynamic loads by waves and currents on coastal and offshore structures, and of coastal zone processes. The major centres on the design and construction of offshore structures, including ocean energy conversion (wind, waves and tide), and geotechnical aspects of offshore foundations.

LABOUR MARKET

Due to the rate of technical developments, highly skilled workers are required in the construction industry now more than ever. A Civil Engineering graduate designs and leads the construction and management of roads, bridges, hydraulic and coastal structures, high-rises, and industrial buildings. Major employers for our graduates are construction companies, engineering and consultancy companies, manufacturers of building components, dredging contractors, the Mobility and Public Works Department of the Flemish Government, as well as provincial and municipal technical services and associations. Civil engineers are also employed in architectural offices and monitoring agencies, insurance companies, banks, real estate companies ...

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TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

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

2 **Na het met succes voltooien van een voorbereidingsprogramma:**
MIN 30 SP - MAX 90 SP
- Bachelor in de industriële wetenschappen, afstudeerrichting: bouwkunde
- Bachelor in de industriële wetenschappen: bouwkunde
- Bachelor in de ingenieurswetenschappen (KMS)
- Een diploma van een opleiding 'Bachelor of Science in de ingenieurswetenschappen' (met inbegrip van 'architectuur')

3 **Rechtstreekse toelating voor het volgen van een brugprogramma (horizontale instroom):**
a opleidingen nieuwe structuur:
- Master in de industriële wetenschappen: bouwkunde

b opleidingen oude structuur:
- Industrieel ingenieur in bouwkunde

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Students who wish to enrol for the Master of Science in Civil Engineering can enter the programme without any prerequisites if they hold the following degree: an academic diploma of Bachelor (or Master) of Science in Engineering (university level, minimum three years), with the main subject in Civil Engineering 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 who hold 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

PRACTICAL INFORMATION

Study programme
studiekiezer.ugent.be/master-of-science-in-civil-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

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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)
International Relations Officer
+32 9 264 36 99
international.ea@ugent.be