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 the Master's programmes in Engineering in English. This underlines the international ambition of the faculty, as well as the importance of international education and multiple language skills for students.

INHOUD

The master's programme in Civil Engineering focuses on the study and design of buildings and structures (roads, bridges, hydraulic structures, high-rise and industrial buildings) and aims for the formation 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. Thus lies in the core curriculum of training a pronounced emphasis on the computational aspects of buildings and infrastructure. By means of elective courses, students can select additional aspects of the field corresponding to the personal aptitude and interests. These elective courses also aim to broaden the training programme.

STRUCTUUR

The master's programme in Civil Engineering consists of two phases: the first phase takes three years and leads to the academic degree of bachelor of engineering, whereas the second phase takes two years and leads to the degree of master of science in civil engineering. During the master's programme students can opt for a deepening or broadening training, by either choosing a Major (depth) or Minor (broadening), or through a comprehensive package of elective courses.

> Construction Design

In the Major Construction Design some specific engineering disciplines are refined. This gives the graduate the baggage to work in the construction industry, having at the same time a broader and a more specialised technological knowledge. In particular, this set of courses pays attention to the conceptual and computer-aided design of structures, structural stability, seismic design, spatial structures, glass and facade structures.

> Dredging and Offshore Engineering

In the Major Dredging and Offshore Engineering a profound knowledge in the field of coastal and offshore engineering is pursued through a coherent set of courses that meet 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. During the course the basic knowledge of maritime technology (ship construction, stability and motions in harbours and approach channels) is addressed. The principles of dredging techniques are treated, with regard to dredging processes and soil mechanical aspects. A deeper understanding and modelling of hydrodynamic loads by waves and currents on coastal and offshore structures, and of coastal zone processes, are taught. The Major centers on the design and construction of offshore structures, including ocean energy conversion (wind, waves and tide), geotechnical aspects of offshore foundations.

ARBEIDSMARKT

Due to the rate of technical developments, highly skilled workers are required in the construction industry now more than ever. A Master of Civil Engineering designs and leads the construction and management of roads, bridges, hydraulic and coastal structures, high-rise and industrial buildings. Major employers of the graduates are construction companies, engineering and consultancy companies, manufacturers of building components, dredging contractors, the administration of the Flemish Region Infrastructure department, provincial and municipal technical services and associations. Civil engineers are also employed in architectural offices and monitoring agencies, insurance companies, banks, real estate companies ...

MASTER OF SCIENCE IN CIVIL ENGINEERING

120 ECTS CREDITS - LANGUAGE: ENGLISH

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.

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

Graduation Fair
afstudeerbeurs.gent/en/students/further-studies

Open Days
26 April 2022 - 17u00 - 19u00 - - Ufo, Campus Ufo, Sint-Pietersnieuwstraat 33, Gent

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