MASTER OF SCIENCE IN CIVIL ENGINEERING

MAJORS: CONSTRUCTION DESIGN • DREDGING AND OFFSHORE ENGINEERING
MINOR: OPERATIONS MANAGEMENT

120 ECTS CREDITS – LANGUAGE: ENGLISH – DEGREE: MASTER OF SCIENCE

COURSE CONTENT

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 their personal aptitude and interests. These elective courses also aim to broaden the training programme.

COURSE STRUCTURE

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 course pays attention to the conceptual design of complex engineering structures. This Major also includes computer-aided design of structures, structural reliability and risk analysis, seismic design, instability and spatial 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, platform, wind farm, island ...), associated with the required 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, tide), geotechnical aspects of offshore foundations, structural reliability and risk analysis.

CAREER PERSPECTIVES

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 ...

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TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

Rechtstreeks:
- Ba ingenieurswetenschappen: bouwkunde
- Ba ingenieurswetenschappen, afstudeerrichting: bouwkunde

Rechtstreeks: (naar brugprogramma - 120 studiepunten)
- Ma industriële wetenschappen: bouwkunde
  opleiding(en) oude structuur:
  - industrieel ingenieur bouwkunde

Via voorbereidingsprogramma: (max. 90 studiepunten)
- (andere) Ba ingenieurswetenschappen (incl. Ba ingenieurswetenschappen: architectuur)
- Ba industriële wetenschappen: bouwkunde
- Ba industriële wetenschappen, afstudeerrichting bouwkunde
- Ba ingenieurswetenschappen (KMS)

TAAL
Je voldoet aan de taalvoorwaarden op basis van je Vlaams diploma.

PRAKTISCHE INFORMATIE

Studieprogramma:
https://studiegids.ugent.be
> faculteiten > opleidingstypes > ga naar de opleiding van je keuze

Alternatieve trajecten
Meer informatie over voorbereidings- en brugprogramma's op www.ugent.be/ea
volg > alles voor toekomstige studenten > voor wie al een diploma heeft

Infomomenten
Masterbeurs
www.ugent.be/masterbeurs
Opleidingsgebonden infosessie
18 april 2018 - 17 u.-19 u. doorlopend, Campus Ufo, Ufo, Sint-Pietersnieuwstraat 33 - Foyer
www.ugent.be/nl/studeren/masteropleidingen

Contact
Trajectbegeleiding:
studietrajectplateau.ea@ugent.be

Meer info
Afdeling Studieadvies – Campus Ufo, Ufo,
Sint-Pietersnieuwstraat 33, 9000 Gent, T 09 331 00 31
studieadvies@ugent.be – www.ugent.be/studieadvies

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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 of 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 with another Bachelor or Master.

LANGUAGE

More information regarding the required knowledge of English:
www.ugent.be/languagerequirements

PRACTICAL INFORMATION

Study programme

www.ugent.be/coursecatalogue
> by Faculty > Programme types > select your programme

Application deadline for international students

- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

www.ugent.be/deadline

Enrolling institution

Ghent University

Tuition fee

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

Contact
Faculty of Engineering and Architecture
International Relations Officer – Degree students
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