

# INTERNATIONAL MASTER OF SCIENCE IN ENVIRONMENTAL TECHNOLOGY AND ENGINEERING

PROGRAMME JOINTLY OFFERED BY GHEENT UNIVERSITY, UNESCO-IHE INSTITUTE FOR WATER EDUCATION, UNIVERSITY OF CHEMISTRY AND TECHNOLOGY, PRAGUE, IHE DELFT INSTITUTE FOR WATER EDUCATION

120 ECTS CREDITS - LANGUAGE: ENGLISH

## WHAT

Growing awareness of the human impact on the environment has convinced most governments of the need to prevent air, water and soil pollution. Increasingly, remediation of contaminated sites is becoming a priority target. Consequently, there is a strong and ever increasing demand for specialists trained in pollution prevention and remediation. This Joint Erasmus Mundus programme addresses these needs by educating a new generation of environmental scientist and engineers that can provide adequate and state-of-the-art environmental technology and engineering solutions to tackle complex, multidisciplinary environmental issues. Successful graduates will have acquired a **comprehensive knowledge** of:

- the nature and severity of environmental pollution;
- the way polluted water, waste, gas, soils and sediments can be treated;
- the way ecosystems and the atmosphere can be protected from pollution;
- the way to prevent environmental pollution through resource management and application of re-use technologies.

They will be able to **develop, design and apply technologies for the prevention and remediation of environmental pollution**. In addition, they should be capable of:

- searching scientific information;
- conducting scientific research in the field of environmental technology and engineering;
- reporting their findings by means of scientific reports and papers;
- communicating effectively in English and transferring knowledge to both the scientific and non-scientific world through oral presentations and media communications.

## STRUCTURE

The overall programme structure is outlined below:

- general course units: 42 credits
- two elective tracks "Ecotechnologies and resource recovery"/"Desalination and water reuse": 25 credits; and "Environmental engineering"/"Resource recovery": 14 credits
- elective courses: 9 credits (can include elective Internship: 6 credits)
- Master's dissertation: 30 credits

## General courses

General environmental technology course units at the introductory level provide the concepts required to specialise in later semesters. They cover environmental biotechnology and remediation technologies for soil, sludge, water, air and waste. To integrate their knowledge, students are exposed to case studies in the course "Interdisciplinary project/Communication and writing skills for Engineers", which they elaborate under guidance. They simultaneously are explicitly introduced to written and oral communications in Engineering. In the second year, "Research-2-Business: Environmental Engineering and Resource Recovery" exposes students to the professional fields through seminars and exercises guided by highly qualified experts from academia and industry. The course unit "Introduction to the Circular Economy, Economics and Management of Natural Resources" provides students with the knowledge and skills to incorporate sustainable principles into their engineering work.

## Elective tracks and elective course units

Students have the flexibility to tailor their educational journey through a combination of elective tracks and elective course units. In the second semester, they can choose between the tracks "Ecotechnologies and Resource Recovery" and "Desalination and Water Reuse". The third semester presents an opportunity to explore either "Environmental Engineering" or "Resource Recovery" tracks. Elective course units offer additional opportunities to tailor the program to individual interests.

## Master's Dissertation

Completing the Master's dissertation is a requirement for any student who wants to obtain their Master's degree. The Master's dissertation is an original piece of research. Its aim is to develop and strengthen the students' research skills. Students select a topic and receive guidance from a supervisor.

## Programme Mobility

Over the course of the study programme, students move between the partner institutions. They begin their academic journey at the University of Chemistry and Technology in Prague, Czech Republic before moving to UNESCO-IHE Delft in The Netherlands for the second semester. The third semester takes them to Ghent University in Gent,

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Belgium. The fourth and final semester is dedicated to their thesis research, which they can conduct at one of the partner institutes or collaborate with an associate partner.

## **LABOUR MARKET**

Trained graduates will be fully prepared to fill executive positions in international institutions (governments, universities, non-governmental organisations, etc.) and private companies that deal with either application and development of pollution prevention, remediation and engineering techniques or regulatory decision-making.

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## TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

### 1 Na onderzoek van de bekwaamheid van de student om de opleiding te volgen:

- Een diploma van een bacheloropleiding in het academisch onderwijs

Additional Information on Admission (Flemish Degree)

Holders of one of the above-mentioned diplomas who wish to follow the course must present themselves to the IMETE-Joint Management Committee of the programme before 15 August of the previous academic year. After this date one cannot be admitted.

## ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

The International Master in Environmental Technology and Engineering (IMETE) has the following admission requirements:

Proof that the applicant has successfully accomplished a first degree of higher education equivalent to a B.Sc. degree (equivalent to 180 credit points according to the European Credit Transfer System (ECTS)) with a good final mark as shown by a Grade Point Average (GPA) of at least B/B+ (US System) or a classification of at least 2nd upper (UK system), in one of the following subjects: pure or applied sciences (e.g., chemistry, biology, geology, civil or agricultural engineering, environmental or agricultural sciences, etc.).

Sufficient academic knowledge of mathematics, physics and chemistry is an absolute requirement and basic knowledge of biology is recommended.

More information on [www.imete.eu](http://www.imete.eu).

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](http://www.ugent.be/prospect/en/administration/enrolment-or-registration).

## LANGUAGE REQUIREMENTS

Language requirements Dutch: no language requirements

Language requirements for this study programme differ from the required standard level for English taught study programmes as specified in the Ghent University Education and Examination Code:

**English:** TOEFL 550 (paper-based) - TOEFL 80 (internet-based) - IELTS: 6.5 (with a minimum of 6.0 for the writing component) - certificate CEF-B2 (issued by a European university language centre) - Cambridge Certificate of Advanced English (CAE)

### Exemptions:

- Prospective students who have a diploma (Secondary Education, Academic Bachelor Degree, Master Degree) issued by an institution officially recognized by the Flemish Government. **Remark:** this exemption does not count for application to Erasmus Mundus Programmes.
- Prospective students who are nationals from or have obtained a bachelor and/or master degree in a higher education institute with English as mode of instruction in USA, Australia, New Zealand, United Kingdom, Republic of Ireland or Canada. In the latter case a certificate has to be submitted that states that English was the language of instruction.

## PRACTICAL INFORMATION

### Study programme

[studiekiezer.ugent.be/international-master-of-science-in-environmental-technology-and-engineering-IMETEB-en/programma](http://studiekiezer.ugent.be/international-master-of-science-in-environmental-technology-and-engineering-IMETEB-en/programma)

### Information sessions

#### Graduation Fair

[afstudeerbeurs.ugent/en/students/further-studies](http://afstudeerbeurs.ugent/en/students/further-studies)

#### Open Days

25 April 2023 19u00 - 21u00 - Campus Coupure (E-blok, Agora), Coupure Links 653, 9000 Gent

### Enrolling institution

Ghent University, IHE Delft Institute for Water Education, University of Chemistry and Technology, Prague

Information on enrolment at Ghent University.

### Application Deadline (for International degree students)

More information on programme specific application procedures and deadlines.

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## **Tuition fee**

More information is to be found on: [www.ugent.be/tuitionfee](http://www.ugent.be/tuitionfee)

[www.imete.eu](http://www.imete.eu)