MASTER OF SCIENCE IN ENVIRONMENTAL SCIENCE AND TECHNOLOGY

MAJORS: MA ESTE 00 CHEMICALS - MA ESTE 00 MARINE - MA ESTE 00 URBAN - MA ESTE 00 DEVELOPING - MA ESTE 00 RECOVERY

120 ECTS CREDITS - LANGUAGE: ENGLISH

WHAT

This Master's programme trains a new generation of professionals to provide sustainable solutions for increasingly complex environmental problems. You will learn to create a healthier living environment for all, whilst avoiding pollution, preserving our ecosystems, and using and recovering resources sustainably. You will also learn to tackle environmental issues from local to global scale, both in developed and developing economies, and from oceans to megacities, duly accounting for the driving forces of global climate change. The first year provides a broad education in all the core disciplines of environmental science and technology. The entire second year allows you to fully specialise (including your Master's dissertation research) in one of three environmental topics of international concern (majors), all of which are supported by top-level Ghent University research. The programme caters to an international audience and is fully English-taught. The study programme can be attended by students from across the globe who are interested in solving environmental problems, regardless of whether they have the ambition to improve the quality of life in their own city or country, or on another continent altogether. This international dimension enables frequent contacts and common activities with fellow-students from various backgrounds and cultures, thus also enhancing the students' social skills.

STRUCTURE

The first-year curriculum (55 credits) is dedicated to acquiring a broad, comprehensive basis in all the core domains of environmental science and technology, divided into five modules:

- Environmental Sustainability and Policy (climate change, legislation and economic aspects);
- Environmental Diagnostics (environmental chemistry, ecotoxicology);
- Environmental Technology (water, soil, air, waste);
- Applied Ecology (freshwater, marine, microbial);
- Research Skills (modelling and simulation).

In the second year, students need to choose one out of three specialist majors (21 credits each):

- Environmental Assessment and Management of Chemicals: environmental contamination with chemical micro-pollutants is of increasing worldwide concern, as it is thought to contribute significantly to human disease and reduced ecological health, including biodiversity loss. In this major, you will learn to improve human and ecosystems health by avoiding or reducing chemical pollution of water, air and soil whilst still enjoying the societal benefits of chemicals;
- Resource Recovery Technology: we are confronted with ramping environmental problems and resource scarcity, driven by an ever-growing global population and boosted material consumption. In a world with finite resources, making the best possible use of them is paramount to the protection of our environment. The recovery of resources from waste is a critical part of the so-called circular economy model. In this major, you will learn to extract precious resources from waste streams to enable a fully circular society;
- Urban Environmental Management: although city densification is often considered a need for a growing world population, it also puts a strong pressure on the urban environmental quality and quality of life of citizens. Major environmental challenges in the next decades will be located in the urban environment. In this major, you will learn to tackle current problems in cities and how sustainability can be guaranteed in urban settings in the future;

The Master's dissertation (30 credits) is also programmed in the second year and is related to the chosen major. Students can either propose their own topic (which could be related to an environmental problem in their own country) or choose one from a list of available topics. For certain topics scholarships are available. Finally, students can complete the remaining fourteen credits with elective course units or a short work placement at a company in the environmental science and technology sector.

LABOUR MARKET

Environmental Science and Technology graduates become active in diverse sectors and take on a wide variety of professional responsibilities. They become – among others – entrepreneurs, policy-makers, science advisers, technology consultants, R&D specialists in the industry, researchers, or lecturers at higher education institutions. The Environmental Science and Technology labour market clamours for people who are broadly trained in all aspects of environmental science and technology. There is also an increasing demand for creative and impactful problem-solvers with advanced knowledge and skills

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in emerging and globally pressing environmental topics, such as those offered in the majors: chemicals management, resource recovery and urban environmental management.

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TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

1 **Rechtstreeks:**

- Bachelor in de bio-industriële wetenschappen
- Bachelor in de bio-ingenieurswetenschappen
- Bachelor in de biochemie en de biotechnologie
- Bachelor in de biologie
- Bachelor in de biomedische wetenschappen
- Bachelor in de biowetenschappen
- Bachelor in de chemie
- Bachelor in de farmaceutische wetenschappen
- Bachelor in de fysica
- Bachelor in de fysica en de sterrenkunde
- Bachelor in de geologie
- Bachelor of Environmental Technology
- Bachelor of Food Technology
- Bachelor of Molecular Biotechnology
- Een diploma van een opleiding 'Bachelor of Science in de industriële wetenschappen'
- Een diploma van een opleiding 'Bachelor of Science in de ingenieurswetenschappen' (met uitzondering van 'architectuur')

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Each application will be evaluated by a board of admission of the specific programme and has to be approved by the Faculty Council and by the Rector's office.

Applicants must have a Bachelor's degree of minimum 3 years with good overall scores (at least a second class or equivalent, preferably higher) from a university or recognised equivalent.

Consult the programme website for specific academic and language requirements.

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

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:
Nationals of Australia, Botswana, Canada, Eritrea, Gambia, Ghana, Guyana, India, Ireland, Kenya, Liberia, Malawi, Namibia, New Zealand, Nigeria, Philippines, Sierra Leone, South Africa, Sri Lanka, Trinidad and Tobago, Uganda, UK, USA, Zambia, and Zimbabwe, need to send proof of at least one year - 60 ECTS (finished successfully) - of comprehensive English-based instruction at a Higher Education Institution (mode of instruction).
Candidates from any other nationality need to present test results of one of the following tests (validity of 5 years; TOEFL/IELTS predictive tests and TOEIC will not be accepted):
- TOEFL IBT 86
- TOEFL PBT 570
- ACADEMIC IELTS 6,5 overall score with a min. of 6 for writing
- CEFR B2

PRACTICAL INFORMATION

Study programme

studiekiezer.ugent.be/master-of-science-in-environmental-science-and-technology-en/programma

Information sessions

Graduation Fair

afstudeerbeurs.gent/en/students/further-studies

Open Days

28 April 2022 19u30 - 21u30 - Campus Coupure, Coupure Links 653, 9000 Gent (Building E, Oehoe and Agora)

Enrolling institution

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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FACULTY OF BIOSCIENCE ENGINEERING

2021-22

Tuition fee

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

Contact

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Faculty of Bioscience Engineering
International Training Centre
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GHENT UNIVERSITY

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