

# MASTER OF SCIENCE IN SUSTAINABLE LAND MANAGEMENT (LAND AND GROUNDWATER MANAGEMENT)

PROGRAMME JOINTLY OFFERED BY VRIJE UNIVERSITEIT BRUSSEL

120 ECTS CREDITS - LANGUAGE: ENGLISH

## INHOUD

Sustainable land and groundwater management and urban land problems and engineering are important global and current environmental issues. Sustainable Land Management refers to practices and technologies that aim at integrating the management of land, water and other environmental resources to meet human needs while ensuring the long-term sustainability of ecosystem services and livelihoods. Worldwide, population pressures and severe degradation, pollution and desertification problems are threatening this – for several countries relatively scarce – natural resource, and cause competition between agricultural or industrial purposes, urban planning and nature conservation. To guarantee a proper use and management of this basic commodity for a nation, well trained specialists with a thorough knowledge of the properties and characteristics of this natural resource, and a solid insight in factors and measures that may alter its actual state and value are warranted and call for a high standard scientific and practical education.

## STRUCTUUR

The Master of Science degree programme in Sustainable Land Management is a two year, full time course. Students can choose between two main subjects: Land and Groundwater Management and Urban Land Engineering. The main subject **Land and Groundwater Management** aims at training researchers, academics, government staff and expert consultants in the inventory and detailed characterisation of land capacity, and of groundwater in particular. Graduates should be able to understand the development and evolution of groundwater under natural conditions or following human interference using field, map, laboratory and remote sensing data. They should have the scientific knowledge to use and manage land and water in a sustainable way, and to optimize land and groundwater use under different natural and environmental conditions. The main subject **Urban Land Engineering** aims at training researchers, academics, government staff and expert consultants in the inventory and detailed characterization of land capacity, and of urban land in particular. Graduates should be able to understand urban hydrology and hydraulics, and the problem of sustainable mobility and logistics, using field, map, laboratory and remote sensing data. They should have the scientific knowledge to use and manage urban land and water in a sustainable way, and to optimize urban land use under different natural and environmental conditions. The course curriculum of the first year, and of the main subject in Land and Groundwater Management of the

second year is organised at Ghent University, whereas all courses of the main subject in Urban Land Engineering of the second year are lectured at Vrije Universiteit Brussel. There is one common course in the second year: "Integrated Project", assuring coherence between both majors. An important part of the programme is allocated to the master dissertation. This is part of the second year programme. Students have to integrate the acquired knowledge with (guided) self-study, which involves experimental work, data analysis and interpretation, writing and communication. The master dissertation is an important measure of the final competences obtained by the student.

## ARBEIDSMARKT

There is a great demand for experts in physical land resources to address the many challenges ahead of us, particularly resulting from the lack of similar programmes worldwide. Implementation of various environmental and climate change related directives and addressing the sustainable development goals, demands well-trained personnel in physical land resources, both in the Global North and South. The great majority of alumni are very satisfied with the programme and with the opportunities it created for their current jobs. Most alumni are employed in theory-oriented and applied research at universities or research institutes; policy making at (inter)governmental and non-governmental organisations; education, training, extension or rural innovation; design, management and interventions at small to medium-sized enterprises or corporate businesses; or take up a consultancy or advisory position.

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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 biowetenschappen
- Bachelor in de chemie
- Bachelor in de fysica
- Bachelor in de fysica en de sterrenkunde
- Bachelor in de geografie
- Bachelor in de geografie en de geomatica
- 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 inbegrip van 'architectuur')

## PRACTICAL INFORMATION

### Study programme

[studiekiezer.ugent.be/master-of-science-in-sustainable-land-management-land-and-groundwater-management-en/programma](http://studiekiezer.ugent.be/master-of-science-in-sustainable-land-management-land-and-groundwater-management-en/programma)

### Information sessions

#### Graduation Fair

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

#### Open Days

### Enrolling institution

Ghent University

### Application deadline

For students who **need a visa**: 1st of April

For students who **do not need a visa**: 1st of June

[Read more](#)

### Tuition fee

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

## ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

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/admission](http://www.ugent.be/admission)

### English: CEFR level B2

Are exempt from submitting a certificate B2 English: students

- having successfully completed at least one year of secondary education with English as language of instruction, or having successfully completed secondary school in a Belgian institution;
- having successfully completed programme units in higher education with a minimum of 54 ECTS-credits where English was the language of instruction. A certificate that the language of instruction was English has to be submitted for institutions in countries where English is not the national language.

### Contact

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### Contact (for international degree students)

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