

Faculty of Bioscience Engineering

Master of Science in Environmental Science and Technology

Language of instruction: English

Programme version 1

1 General Courses

60 credits

1.1 Module Environmental Sustainability and Policy

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002701 Clean Technology: Theory and Concepts Sophie Huysveld -- Department of Green Chemistry and Technology	3		1	A:1	90
2	I002585 Sustainability and Environmental Economics Stijn Speelman -- Department of Agricultural Economics	4		1	A:2	120
3	I002586 Multidisciplinary Analysis of Climate Change Pascal Boeckx -- Department of Green Chemistry and Technology	3		1	A:2	90
4	I001571 Environmental Legislation Frank Maes -- Department of European, Public and International Law	3		1	A:1	75

1.2 Module Environmental Diagnostics

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002587 Environmental Chemistry and Analysis: Atmospheric Processes Christophe Walgraeve -- Department of Green Chemistry and Technology	5		1	A:1	150
2	I002588 Environmental Chemistry and Analysis: Water, Soil and Sediment Filip Tack -- Department of Green Chemistry and Technology	5		1	A:1	150
3	I002606 Environmental Risk Assessment Karel De Schamphelaere -- Department of Animal Sciences and Aquatic Ecology	5		1	A:1	150

1.3 Module Environmental Technology

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002508 Environmental Technology: Water Jo De Vrieze -- Department of Biotechnology	5		1	B:2	150
2	I002589 Environmental Technology: Soil and Sediment Filip Tack -- Department of Green Chemistry and Technology	3		1	A:2	90
3	I002590 Environmental Technology: Air Christophe Walgraeve -- Department of Green Chemistry and Technology	4		1	A:2	120
4	I002591 Environmental Technology: Waste Frederik Ronsse -- Department of Green Chemistry and Technology	3		1	A:2	90

1.4 Module Applied Ecology

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002504 Applied Freshwater Ecology Peter Goethals -- Department of Animal Sciences and Aquatic Ecology	3		1	A:1	90
2	I002535 Applied Marine Ecology Colin Janssen -- Department of Animal Sciences and Aquatic Ecology	3		1	A:1	90
3	I002609 Environmental Microbiology Nico Boon -- Department of Biotechnology	3		1	A:1	90

1.5 Module Environmental Research Skills

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002593 Introduction to Environmental Modelling and Simulation David Fernandes del Pozo -- Department of Data Analysis and Mathematical Modelling	3		1	A:2	90

2	I002594	Environmental Research Skills and Experimental Design Gijs Du Laing -- Department of Green Chemistry and Technology	5	1	A:J	150
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2 Majors

24 credits

Subscribe to 24 credit units from 1 major from the following list.

2.1 Major Environmental Assessment and Management of Chemicals 24 credits

Subscribe to 24 credit units from the following list.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002595 Emerging Topics and Current Practice in Environmental Risk Assessment Karel De Schampheleere -- Department of Animal Sciences and Aquatic Ecology	6		2	A:2	180
2	I002596 Environmental Fate and Management of Pesticides Pieter Spanoghe -- Department of Plants and Crops	6		2	A:1	180
3	I002597 Urban and Indoor Air Quality Christophe Walgraeve -- Department of Green Chemistry and Technology	6		2	A:1	180
4	I002749 Metals and Metalloids in Environment and Technology Filip Tack -- Department of Green Chemistry and Technology	6		2	A:1	180

2.2 Major Resource Recovery Technology 24 credits

Subscribe to 24 credit units from the following list.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002702 Clean Technology: Assessment Methods Sophie Huysveld -- Department of Green Chemistry and Technology	3		2	A:1	90
2	I002598 Physico-Chemical Resource Recovery from Aqueous Waste Streams Arne Verliefde -- Department of Green Chemistry and Technology	6		2	A:1	180
3	I002599 Digitalisation for Resource Recovery Piet Seuntjens -- Department of Data Analysis and Mathematical Modelling	6		2	A:1	180
4	I002607 Resource Recovery Technology Ramon Ganigué -- Department of Biotechnology	5		2	B:2	150
5	I002600 Non-technological Drivers and Challenges of Resource Recovery Stijn Speelman -- Department of Agricultural Economics	4		2	A:2	120

2.3 Major Environmental Health and Technology for Developing Economies 24 credits

Subscribe to 24 credit units from the following list.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002601 Basic Concepts in Environmental Health Stefaan De Henauw -- Department of Public Health and Primary Care	4		2	(A:1) ^c	120
2	I002608 Decentralized Sanitation and Treatment Technologies for Developing Economies	6		2	(A:1) ^c	180
3	I002607 Resource Recovery Technology Ramon Ganigué -- Department of Biotechnology	5		2	B:2	150
4	I002698 Water Quality Management Peter Goethals -- Department of Animal Sciences and Aquatic Ecology	4		2	A:2	120
5	I002714 Rural Project Management Hans De Steur -- Department of Agricultural Economics	5		2	A:2	150

2.4 Major Urban Environmental Management 24 credits

Subscribe to 24 credit units from the following list.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002851 Urban Ecology and Management Ben Somers -- Department of Environment	3		2	A:1	90
2	I002597 Urban and Indoor Air Quality Christophe Walgraeve -- Department of Green Chemistry and Technology	6		2	A:1	180
3	C003534 Urban Mobility and Logistics Frank Witlox -- Department of Geography	3		2	B:1	90
4	I001439 Environmental Noise Timothy Van Renterghem -- Department of Information Technology	4		2	B:1	120
5	E084571 Urban Analysis and Design Michiel Dehaene -- Department of Architecture and Urban Planning	3		2	B:1	90
6	I001542 Environmental Impact Assessment: Integrated Project Sophie Huysveld -- Department of Green Chemistry and Technology	5		2	A:2	135

2.5 Major Environmental Health and Technology for Marine Systems

24 credits

Subscribe to 24 credit units from the following list.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002603 Blue Growth: An Interdisciplinary Approach to Research and Innovation in the Marine Environment Colin Janssen -- Department of Animal Sciences and Aquatic Ecology	3		2		90
2	C003870 Marine Policy and Governance Klaas Willaert -- Department of European, Public and International Law	3		2	A:1	75
3	I000928 Aquaculture Environmental Impact Jana Asselman -- Department of Animal Sciences and Aquatic Ecology	3		2	A:2	90
4	I002604 Oceans and Human Health Jana Asselman -- Department of Animal Sciences and Aquatic Ecology	3		2	A:1	90
5	E054820 Inland Waterways and Locks Tom De Mulder -- Department of Civil Engineering	4		2	D:2	120
6	C002642 Dredging and Offshore Constructions Bruno Stuyts -- Department of Civil Engineering	3		2	A:2	75
7	I002605 Seminars and Company Visits Colin Janssen -- Department of Animal Sciences and Aquatic Ecology	5		2		150

3 Elective Courses

6 credits

Subscribe to 6 credit units from no less than 1 and no more than 3 modules from the following list.

3.1 Courses from the Majors

Subscribe to no more than 6 credit units from the majors, with the exception of the courses taken within the chosen major.

3.2 Internship

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I001884 Internship Karel De Schampheleere -- Department of Animal Sciences and Aquatic Ecology	6		2	A:J	150

3.3 Ghent University Elective Courses in English

Subscribe to no more than 6 credit units from the [Ghent University Elective Courses in English](#)

4 Master's Dissertation

30 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I001508 Master's Dissertation Karel De Schampheleere -- Department of Animal Sciences and Aquatic Ecology	30		2	A:J	900

Teaching

When a course is not taught (solely) in the programme's language of instruction, the effectively used languages are indicated in square brackets following the course name, using the following ISO codes:

bg: Bulgarian	de: German	es: Spanish	ja: Japanese	pl: Polish	sh: Croatian/Serbian	zh: Chinese
cs: Czech	el: Greek	fr: French	nl: Dutch	pt: Portuguese	sl: Slovene	
da: Danish	en: English	it: Italian	no: Norwegian	ru: Russian	sv: Swedish	

Semester

Semesters are indicated by their number (1 or 2); semester 3 represents the summer period and J indicates a course spanning semesters 1 and 2. When a capital letter precedes a semester number, the course has multiple offerings. The letter indicates the offering concerned.

When a semester is shown in brackets, the course is not offered this year in the specific offering.

The offering frequency and first year of offering are indicated by the following codes:

a: bi-annually	c: annually, from 2023-2024	f: annually, from 2024-2025	i: annually, from 2025-2026
b: tri-annually	d: bi-annually, from 2023-2024	g: bi-annually, from 2024-2025	j: bi-annually, from 2025-2026
	e: tri-annually, from 2023-2024	h: tri-annually, from 2024-2025	k: tri-annually, from 2025-2026