

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 Pieter Nachtergaele -- 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 Korneel Rabaey -- 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 Karel Folens -- 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) <sup>c</sup>	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 Pieter Nachtergaele -- Department of Green Chemistry and Technology	3		2	A:1	90
2	I002598 Physico-Chemical Resource Recovery from Aqueous Waste Streams Marjolein Vanoppen -- 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	120
2	I002608 Decentralized Sanitation and Treatment Technologies for Developing Economies Korneel Rabaey -- Department of Biotechnology	6		2	A:1	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 Marijke D'Haese -- 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	A:1	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 Peter Bossier -- 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	A:J	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 Schamphelaere -- 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 Schamphelaere -- 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 2022-2023	f: annually, from 2023-2024	i: annually, from 2024-2025
b: tri-annually	d: bi-annually, from 2022-2023	g: bi-annually, from 2023-2024	j: bi-annually, from 2024-2025
	e: tri-annually, from 2022-2023	h: tri-annually, from 2023-2024	k: tri-annually, from 2024-2025