

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 <i>Sophie Huysveld -- Department of Green Chemistry and Technology</i>	3		1	A:1	90
2	I002585 Sustainability and Environmental Economics <i>Stijn Speelman -- Department of Agricultural Economics</i>	4		1	A:2	120
3	I002586 Multidisciplinary Analysis of Climate Change <i>Pascal Boeckx -- Department of Green Chemistry and Technology</i>	3		1	A:2	90
4	I001571 Environmental Legislation <i>Frank Maes -- Department of European, Public and International Law</i>	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 <i>Christophe Walgraeve -- Department of Green Chemistry and Technology</i>	5		1	A:1	150
2	I002588 Environmental Chemistry and Analysis: Water, Soil and Sediment <i>Filip Tack -- Department of Green Chemistry and Technology</i>	5		1	A:1	150
3	I002606 Environmental Risk Assessment <i>Karel De Schampelaere -- Department of Animal Sciences and Aquatic Ecology</i>	5		1	A:1	150

### 1.3 Module Environmental Technology

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

### 1.4 Module Applied Ecology

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002504 Applied Freshwater Ecology <i>Peter Goethals -- Department of Animal Sciences and Aquatic Ecology</i>	3		1	A:1	90
2	I002535 Applied Marine Ecology <i>Colin Janssen -- Department of Animal Sciences and Aquatic Ecology</i>	3		1	A:1	90
3	I002609 Environmental Microbiology <i>Nico Boon -- Department of Biotechnology</i>	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 <i>David Fernandes del Pozo -- Department of Data Analysis and Mathematical Modelling</i>	3		1	A:2	90

2	I002594	Environmental Research Skills and Experimental Design <i>Gijs Du Laing -- Department of Green Chemistry and Technology</i>	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 <i>Karel De Schampheleere -- Department of Animal Sciences and Aquatic Ecology</i>	6		2	A:2	180
2	I002596 Environmental Fate and Management of Pesticides <i>Pieter Spanoghe -- Department of Plants and Crops</i>	6		2	A:1	180
3	I002597 Urban and Indoor Air Quality <i>Christophe Walgraeve -- Department of Green Chemistry and Technology</i>	6		2	A:1	180
4	I002749 Metals and Metalloids in Environment and Technology <i>Filip Tack -- Department of Green Chemistry and Technology</i>	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 <i>Sophie Huysveld -- Department of Green Chemistry and Technology</i>	3		2	A:1	90
2	I002598 Physico-Chemical Resource Recovery from Aqueous Waste Streams <i>Arne Verliefde -- Department of Green Chemistry and Technology</i>	6		2	A:1	180
3	I002599 Digitalisation for Resource Recovery <i>Piet Seuntjens -- Department of Data Analysis and Mathematical Modelling</i>	6		2	A:1	180
4	I002607 Resource Recovery Technology <i>Ramon Ganigué -- Department of Biotechnology</i>	5		2	B:2	150
5	I002600 Non-technological Drivers and Challenges of Resource Recovery <i>Stijn Speelman -- Department of Agricultural Economics</i>	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 <i>Stefaan De Henauw -- Department of Public Health and Primary Care</i>	4		2	(A:1) <sup>c</sup>	120
2	I002608 Decentralized Sanitation and Treatment Technologies for Developing Economies	6		2	(A:1) <sup>c</sup>	180
3	I002607 Resource Recovery Technology <i>Ramon Ganigué -- Department of Biotechnology</i>	5		2	B:2	150
4	I002698 Water Quality Management <i>Peter Goethals -- Department of Animal Sciences and Aquatic Ecology</i>	4		2	A:2	120
5	I002714 Rural Project Management <i>Hans De Steur -- Department of Agricultural Economics</i>	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 <i>Ben Somers -- Department of Environment</i>	3		2	A:1	90
2	I002597 Urban and Indoor Air Quality <i>Christophe Walgraeve -- Department of Green Chemistry and Technology</i>	6		2	A:1	180
3	C003534 Urban Mobility and Logistics <i>Frank Witlox -- Department of Geography</i>	3		2	B:1	90
4	I001439 Environmental Noise <i>Timothy Van Renterghem -- Department of Information Technology</i>	4		2	B:1	120
5	E084571 Urban Analysis and Design <i>Michiel Dehaene -- Department of Architecture and Urban Planning</i>	3		2	B:1	90

6	I001542	Environmental Impact Assessment: Integrated Project <i>Sophie Huysveld -- Department of Green Chemistry and Technology</i>	5	2	A:2	135
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## 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 <i>Colin Janssen -- Department of Animal Sciences and Aquatic Ecology</i>	3		2		90
2	C003870 Marine Policy and Governance <i>Klaas Willaert -- Department of European, Public and International Law</i>	3		2	A:1	75
3	I000928 Aquaculture Environmental Impact <i>Jana Asselman -- Department of Animal Sciences and Aquatic Ecology</i>	3		2	A:2	90
4	I002604 Oceans and Human Health <i>Jana Asselman -- Department of Animal Sciences and Aquatic Ecology</i>	3		2	A:1	90
5	E054820 Inland Waterways and Locks <i>Tom De Mulder -- Department of Civil Engineering</i>	4		2	D:2	120
6	C002642 Dredging and Offshore Constructions <i>Bruno Stuyts -- Department of Civil Engineering</i>	3		2	A:2	75
7	I002605 Seminars and Company Visits <i>Colin Janssen -- Department of Animal Sciences and Aquatic Ecology</i>	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 <i>Karel De Schamphelaere -- Department of Animal Sciences and Aquatic Ecology</i>	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 <i>Karel De Schamphelaere -- Department of Animal Sciences and Aquatic Ecology</i>	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