GHENT UNIVERSITY

Study Programme

Academic year 2026-2027

Faculty of Bioscience Engineering

Master of Science in Environmental Science and Technology

Language of instruction: English

Programme version 4

1 General Courses — 55 credits

1.1 Module Environmental Sustainability and Policy — 13 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I003061	Concepts for Sustainable Systems Engineering *Sophie Huysveld -- Department of Green Chemistry and Technology*	3		1	A:1	90
2	I002586	Multidisciplinary Analysis of Climate Change *Pascal Boeckx -- Department of Green Chemistry and Technology*	3		1	A:2	90
3	I001571	Environmental Legislation *Hendrik Schoukens -- Department of European, Public and International Law*	3		1	A:1	75
4	I002718	Economics and Management of Natural Resources *Stijn Speelman -- Department of Agricultural Economics*	4		1	A:2	120

1.2 Module Environmental Diagnostics — 15 credits

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 — 15 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I003072	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 *Stef Ghysels -- Department of Green Chemistry and Technology*	3		1	A:2	90

1.4 Module Applied Ecology — 9 credits

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 *Ilias Semmouri -- 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 Research Skills — 3 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I003030	Introduction to Modelling and Simulation *Maxime Van Haeverbeke -- Department of Data Analysis and Mathematical Modelling*	3		1	A:2	90

2 Majors 21 credits

Subscribe to 21 credit units from 1 major from the following list. Subject to approval by the faculty.

2.1 Major Environmental Assessment and Management of Chemicals 21 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I002597	Urban and Indoor Air Quality *Christophe Walgraeve -- Department of Green Chemistry and Technology*	6		2	A:1	180
2	I003014	Emerging Topics and Current Practice in Environmental Risk Assessment *Karel De Schamphelaere -- Department of Animal Sciences and Aquatic Ecology*	5		2	A:2	150
3	I003015	Environmental Fate and Management of Pesticides *Pieter Spanoghe -- Department of Plants and Crops*	5		2	A:1	150
4	I003016	Metals and Metalloids in Environment and Technology *Filip Tack -- Department of Green Chemistry and Technology*	5		2	A:1	150

2.2 Major Resource Recovery Technology 21 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I003062	Sustainability Assessment *Sophie Huysveld -- 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	I002607	Resource Recovery Technology *Jo De Vrieze -- Department of Biotechnology*	5		2	B:2	150
4	I002600	Non-technological Drivers and Challenges of Resource Recovery *Stijn Speelman -- Department of Agricultural Economics*	4		2	A:2	120
5	I003017	Digitalisation for Resource Recovery *Saba Daneshgar -- Department of Data Analysis and Mathematical Modelling*	3		2	A:1	90

2.3 Major Urban Environmental Management 21 credits

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 *Giovanni Circella -- Department of Geography*	5		2	A:1	150
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

3 Elective Courses 14 credits

Subscribe to 14 credit units from no less than 1 and no more than 3 module(s) from the following list. Subject to approval by the faculty.

3.1 Courses from the Majors

Subscribe to no more than 14 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 *Christophe Walgraeve -- Department of Green Chemistry and Technology*	6		2	A:J	150

3.3 Open Choice

Subscribe to no more than 14 credit units from courses offered at Ghent University, including Ghent University Elective Courses.
Subject to approval by the faculty.

4 Master's Dissertation 30 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I001508	Master's Dissertation *Christophe Walgraeve -- Department of Green Chemistry and Technology*	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 cours name, using the following ISO codes:

bg: Bulgarian	de: German	es: Spanish	ja: Japanese	pl: Polish	sh: Kroatian/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 in 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 2027-2028	f: annually, from 2028-2029	i: annually, from 2029-2030
b: tri-annually	d: bi-annually, from 2027-2028	g: bi-annually, from 2028-2029	j: bi-annually, from 2029-2030
	e: tri-annually, from 2027-2028	h: tri-annually, from 2028-2029	k: tri-annually, from 2029-2030