GHENT UNIVERSITY

Study Programme

Academic year 2025-2026

Faculty of Bioscience Engineering

Master of Science in Bioscience Engineering: Environmental Technology

Language of instruction: Dutch

Programme version 17

1 General Courses — 60 credits

1.1 Environmental Analysis and Diagnostics — 14 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I002668	Analytical Inorganic Chemistry: Instrumental Techniques *Gijs Du Laing -- Department of Green Chemistry and Technology*	3		1	A:1	90
2	I002676	Analysis of Organic Micropollutants *Kristof Demeestere -- Department of Green Chemistry and Technology*	3		1	A:2	90
3	I002535	Applied Marine Ecology [en] *Colin Janssen -- Department of Animal Sciences and Aquatic Ecology*	3		1	A:1	90
4	I002606	Environmental Risk Assessment [en] *Karel De Schamphelaere -- Department of Animal Sciences and Aquatic Ecology*	5		1	A:1	150

1.2 Environmental Technology and Engineering — 36 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I003071	Process Engineering 2 [en] *Paul Van der Meeren -- Department of Green Chemistry and Technology*	5		1	A:1	150
2	I003080	Process Control [en] *Paul Van Liedekerke -- Department of Data Analysis and Mathematical Modelling*	5		1	A:2	150
3	I002682	Environmental Technology: Air *Christophe Walgraeve -- Department of Green Chemistry and Technology*	5		1	A:1	150
4	I002683	Environmental Technology: Soil *Ellen Van De Vijver -- Department of Environment*	5		1	A:1	150
5	I002607	Resource Recovery Technology [en] *Ramon Ganigué -- Department of Biotechnology*	6		1	A:2	180
6	I003062	Sustainability Assessment [en] *Sophie Huysveld -- Department of Green Chemistry and Technology*	3		1	A:1	90
7	I002684	Environmental Constructions in Practice *Eveline Volcke -- Department of Green Chemistry and Technology*	7		2	A:J	210

1.3 Environmental Legislation and Socio-Economic Aspects — 10 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I003068	Management for Engineers [en] *Jeroen Buysse -- Department of Agricultural Economics*	4		2	A:1	120
2	I002685	Legal Framework for Environmental Technology *Hildegard Deweerdt -- Department of Agricultural Economics*	6		2	A:1	180

2 Elective Courses — 30 credits

Subscribe to 30 credit units from 2 modules from the following list, of which at least 15 credit units from module 2.1. and at least 5 credit unitis from module 2.2.

2.1 Discipline-Specific Courses

Subscribe to at least 15 credit units from no less than 1 and no more than 2 module(s) from the following list.
To obtain the minor, all courses listed in that minor have to be taken.

2.1.1 Minor Environmental Coordination

Nr	Course		CRDT	Ref	MT1	Session	Study
1	F000752	Environmental Economics and Policy *Brent Bleys -- Department of Economics*	4			B:2	120
2	I001439	Environmental Noise [en] *Timothy Van Renterghem -- Department of Information Technology*	3			A:1	75
3	I002716	Environmental Impact Assessment *Sophie Huysveld -- Department of Green Chemistry and Technology*	4			A:2	120
4	I002748	Environmental Coordination *Hildegard Deweerdt -- Department of Agricultural Economics*	5			A:2	150

2.1.2 Elective List

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I003016	Metals and Metalloids in Environment and Technology [en] *Filip Tack -- Department of Green Chemistry and Technology*	5			A:1	150
2	I002698	Water Quality Management [en] *Peter Goethals -- Department of Animal Sciences and Aquatic Ecology*	4			A:2	120
3	I002751	Principles of Quantitative Water Management *Niko Verhoest -- Department of Environment*	3			A:2	90
4	I002604	Oceans and Human Health [en] *Jana Asselman -- Department of Animal Sciences and Aquatic Ecology*	3			A:1	90
5	I002752	Advanced Wastewater Treatment Process Design [en] *Eveline Volcke -- Department of Green Chemistry and Technology*	3			A:1	90
6	I002608	Decentralized Sanitation and Treatment Technologies for Developing Economies [en] *Korneel Rabaey -- Department of Biotechnology*	6			A:1	180
7	I002510	Reaction Kinetics and Reactor Design *Paul Van der Meeren -- Department of Green Chemistry and Technology*	5			A:2	150
8	I002677	Thermochemical Conversion of Biomass *Stef Ghysels -- Department of Green Chemistry and Technology*	4			A:2	120
9	I002679	Green Chemistry of Renewable Resources [en] *Sven Mangelinckx -- Department of Green Chemistry and Technology*	4			A:1	120
10	I002452	Geographic Information Systems: Basics *Frieke Vancoillie -- Department of Environment*	3			A:2	90

2.2 Cross-Disciplinary Elective Courses

Subscribe to 1 module from the following list.
Courses for which the final competencies are already (largely) achieved by another course in the curriculum cannot be included as part of the elective set.
Subject to approval by the faculty.

2.2.1 Elective Set

2.2.1.1 Cross-Disciplinary Elective Set for Bioscience Engineers

Subscribe to 15 credit units from the following list, with no more than 10 credit units with reference A.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I003053	Machine Learning for Life Sciences [en] *Willem Waegeman -- Department of Data Analysis and Mathematical Modelling*	4			A:1	120
2	I003054	Computer Vision for Life Sciences [en] *Jan Verwaeren -- Department of Data Analysis and Mathematical Modelling*	5			A:2	150
3	I003021	Advanced Biosystems Modelling [en] *Paul Van Liedekerke -- Department of Data Analysis and Mathematical Modelling*	5			A:2	150
4	I001280	Experimental Design [en] *Stijn Luca -- Department of Data Analysis and Mathematical Modelling*	3			A:2	75
5	I003068	Management for Engineers [en] *Jeroen Buysse -- Department of Agricultural Economics*	4			A:1	120
6	I002718	Economics and Management of Natural Resources [en] *Stijn Speelman -- Department of Agricultural Economics*	4			A:2	120
7	I002750	Isotopes in Biosciences [en] *Pascal Boeckx -- Department of Green Chemistry and Technology*	5			A:1	150
8	I003055	Biodiversity and Nature Conservation *Lander Baeten -- Department of Environment*	4			A:1	120

9	I002586	Multidisciplinary Analysis of Climate Change [en] *Pascal Boeckx -- Department of Green Chemistry and Technology*	3			A:2	90
10	I003056	Human Nutrition and Health [en] *John Van Camp -- Department of Food Technology, Safety and Health*	5			A:1	150
11	I002758	Food Marketing and Consumer Behaviour [en] *Wim Verbeke -- Department of Agricultural Economics*	5			A:1	150
12	I003067	Bioethics [en] *Michiel De Proost -- Department of Philosophy and Moral Sciences*	3			A:1	75
13	I002637	Internship [en, nl] *Paul Van der Meeren -- Department of Green Chemistry and Technology*	5	A		A:J	150
14	I002638	International Internship [en, nl] *Paul Van der Meeren -- Department of Green Chemistry and Technology*	5	A		A:J	150
15	I002639	Extended Internship [en, nl] *Paul Van der Meeren -- Department of Green Chemistry and Technology*	10	A		A:J	300
16	I002640	Extended International Internship [en, nl] *Paul Van der Meeren -- Department of Green Chemistry and Technology*	10	A		A:J	300

2.2.2 Open Choice

Subscribe to course units from courses offered at Ghent University, including the Ghent University Elective Courses.
A minimum of 5 credit units is required from module 2.2.1.1. "Cross-Disciplinary Elective Set for Bioscience Engineers".
Maximum 8 credit units language courses are allowed within this master programme.

3 Master's Dissertation 30 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I001479	Master's Dissertation *Kristof Demeestere -- 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 2026-2027	f: annually, from 2027-2028	i: annually, from 2028-2029
b: tri-annually	d: bi-annually, from 2026-2027	g: bi-annually, from 2027-2028	j: bi-annually, from 2028-2029
	e: tri-annually, from 2026-2027	h: tri-annually, from 2027-2028	k: tri-annually, from 2028-2029