GHENT UNIVERSITY

Study Programme

Academic year 2022-2023

Faculty of Bioscience Engineering

Master of Science in Bioscience Engineering: Environmental Technology

Language of instruction: Dutch

Programme version 14

1 General Courses — 64 credits

1.1 Environmental Analysis and Diagnostics — 18 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
5	I002681	Ecosystem Modelling [en] *Karel De Schamphelaere -- Department of Animal Sciences and Aquatic Ecology*	4		1	A:2	120

1.2 Environmental Technology and Engineering — 36 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I002618	Process Engineering 2 [en] *Paul Van der Meeren -- Department of Green Chemistry and Technology*	5		1	A:1	150
2	I002672	Process Control [en] *Kimberly Tumlos Solon -- 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	I002702	Clean Technology: Assessment Methods [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	I002619	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 — 26 credits

Subscribe to 26 credit units from the module(s) 12.2.1 to 12.2.5 from the following list. Subject to approval by the faculty.
To obtain the minor, all courses listed in that minor have to be taken.

Full-time standard learning track:
Students can choose which of the elective course units are taken in the first respectively the second standard learning track year (unless otherwise specified); in combination with the general course units, students take a total of 54 to 66 credits per standard learning

track year. The sum of the total number of credits taken up over the 2 standard learning track years must be 120 credits.

2.1 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

2.2 Master Specific Courses

2.2.1 Environmental Diagnostics and Management

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I002596	Environmental Fate and Management of Pesticides [en] *Pieter Spanoghe -- Department of Plants and Crops*	6			A:1	180
2	I002749	Metals and Metalloids in Environment and Technology [en] *Filip Tack -- Department of Green Chemistry and Technology*	6			A:1	180
3	I002750	Isotopes in Biosciences [en] *Pascal Boeckx -- Department of Green Chemistry and Technology*	5			A:1	150
4	I002586	Multidisciplinary Analysis of Climate Change [en] *Pascal Boeckx -- Department of Green Chemistry and Technology*	3			A:2	90
5	I002691	Nature Conservation *Lander Baeten -- Department of Environment*	4			A:1	120
6	I002698	Water Quality Management [en] *Peter Goethals -- Department of Animal Sciences and Aquatic Ecology*	4			A:2	120
7	I002751	Principles of Quantitative Water Management *Niko Verhoest -- Department of Environment*	3			A:2	90
8	I002604	Oceans and Human Health [en] *Jana Asselman -- Department of Animal Sciences and Aquatic Ecology*	3			A:1	90

2.2.2 Environmental Technology and Engineering

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I002608	Decentralized Sanitation and Treatment Technologies for Developing Economies [en]	6			(A:1)[c]	180
2	I002752	Advanced Wastewater Treatment Process Design [en] *Eveline Volcke -- Department of Green Chemistry and Technology*	3			A:1	90
3	I002599	Digitalisation for Resource Recovery [en] *Piet Seuntjens -- Department of Data Analysis and Mathematical Modelling*	5			B:1	150
4	I002677	Thermochemical Conversion of Biomass *Frederik Ronsse -- Department of Green Chemistry and Technology*	4			A:2	120
5	I002679	Green Chemistry of Renewable Resources [en] *Sven Mangelinckx -- Department of Green Chemistry and Technology*	4			A:1	120

2.2.3 Multidisciplinary Engineering Tools

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I002614	Microbiomics [en] *Nico Boon -- Department of Biotechnology*	4			A:1	120
2	I002452	Geographic Information Systems: Basics *Frieke Vancoillie -- Department of Environment*	3			A:2	90
3	I002091	Predictive Modelling [en] *Willem Waegeman -- Department of Data Analysis and Mathematical Modelling*	5			B:1	150
4	I002636	Spatio-temporal Models [en] *Jan Baetens -- Department of Data Analysis and Mathematical Modelling*	5			A:2	150
5	I002719	Modelling and Simulation with Partial Differential Equations in Practice [en] *Ingmar Nopens -- Department of Data Analysis and Mathematical Modelling*	5			A:1	150

6	I001280	Experimental Design [en] *Stijn Luca -- Department of Data Analysis and Mathematical Modelling*	3		A:2	75

2.3 Entrepreneurship and Management

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I001949	Entrepreneurship *Petra Andries -- Department of Marketing, Innovation and Organisation*	3			A:2	75
2	E076460	Dare to Venture [en] *Johan Verrue -- Department of Marketing, Innovation and Organisation*	4			A:2	120
3	E076471	Dare to Start [en] *Frank Gielen -- Department of Information Technology*	3			A:2	90
4	E076930	Financial and Cost Price Reporting in Companies *Faculteit Economie en Bedrijfskunde, Sophie Maussen -- Department of Accounting, Corporate Finance and Taxation*	6			A:1	180
5	I002720	Consumer Behaviour and Marketing of Bio-industrial products *Wim Verbeke -- Department of Agricultural Economics*	5			A:2	150
6	I001967	Intellectual Property and Valorization [en] *Benedikt Sas -- Department of Food Technology, Safety and Health*	3			A:2	90
7	C000833	Project Management *Mario Vanhoucke -- Department of Business Informatics and Operations Management*	4			A:2	120

2.4 Skills and Attitudes

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I002637	Internship [en, nl] *Paul Van der Meeren -- Department of Green Chemistry and Technology*	5	a		A:J	150
2	I002638	International Internship [en, nl] *Paul Van der Meeren -- Department of Green Chemistry and Technology*	5	a		A:J	150
3	I002639	Extended Internship [en, nl] *Paul Van der Meeren -- Department of Green Chemistry and Technology*	10	a		A:J	300
4	I002640	Extended International Internship [en, nl] *Paul Van der Meeren -- Department of Green Chemistry and Technology*	10	a		A:J	300
5	I001944	Bio-ethics [en] *Farah Focquaert -- Department of Philosophy and Moral Sciences*	3			A:1	75
6	C002668	Scientific Communication in English [en] *Geert Jacobs -- Department of Linguistics*	5			A:2	150
7	I001784	Seminar [en, nl] *Mieke Uyttendaele -- Department of Food Technology, Safety and Health*	3			A:J	75

2.5 Open Choice

Subscribe to course units from courses offered at Ghent University and at the alliance partner VUB, including the Ghent University Elective Courses.
A maximum of 2 such courses is allowed.
Maximum 8 credit units language courses are allowed within this master programme.
Subject to approval by the Faculty.

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 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