

Faculty of Bioscience Engineering

Master of Science in Bioscience Engineering: Environmental Technology

Language of instruction: Dutch

Programme version 13

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, nl] Paul Van der Meeren -- Department of Green Chemistry and Technology	5		1	A:1	150
2	I002672 Process Control 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] Pieter Nachtergaele -- 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, nl] 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] Korneel Rabaey -- Department of Biotechnology	6			A:1	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] Andreja Rajkovic -- Department of Food Technology, Safety and Health	4			A:1	120
2	I002452 Geographic Information Systems: Basics Fieke Vancoillie -- Department of Environment	3			A:2	90
3	I002091 Predictive Modelling [en] Willem Waegeman -- Department of Data Analysis and Mathematical Modelling	5			B:2	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] Tom Desmet -- Department of Biotechnology	5	a		A:J	150
2	I002638 International Internship [en, nl] Tom Desmet -- Department of Biotechnology	5	a		A:J	150
3	I002639 Extended Internship [en, nl] Tom Desmet -- Department of Biotechnology	10	a		A:J	300
4	I002640 Extended International Internship [en, nl] Tom Desmet -- Department of Biotechnology	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
8	I002890 Interdisciplinary Study of the Climate Neutral City Mission [en] Jo De Vrieze -- Department of Biotechnology	5	ENLIG		A:2	150

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 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