

Faculty of Bioscience Engineering

Master of Science in Bioscience Engineering: Environmental Technology

Language of instruction: Dutch

Programme version 16

## 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	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] 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	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 30 credits

Subscribe to 30 credit units from the 1 to 5 modules 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
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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	I003016 Metals and Metalloids in Environment and Technology [en] Filip Tack -- Department of Green Chemistry and Technology	5			A:1	150
2	I002750 Isotopes in Biosciences [en] Pascal Boeckx -- Department of Green Chemistry and Technology	5			A:1	150
3	I002586 Multidisciplinary Analysis of Climate Change [en] Pascal Boeckx -- Department of Green Chemistry and Technology	3			A:2	90
4	I002691 Nature Conservation Lander Baeten -- Department of Environment	4			A:1	120
5	I002698 Water Quality Management [en] Peter Goethals -- Department of Animal Sciences and Aquatic Ecology	4			A:2	120
6	I002751 Principles of Quantitative Water Management Niko Verhoest -- Department of Environment	3			A:2	90
7	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	I002677 Thermochemical Conversion of Biomass Frederik Ronsse -- Department of Green Chemistry and Technology	4			A:2	120
4	I002679 Green Chemistry of Renewable Resources [en] Sven Mangelinckx -- Department of Green Chemistry and Technology	4			A:1	120
5	I002510 Reaction Kinetics and Reactor Design Paul Van der Meeren -- Department of Green Chemistry and Technology	5			A:2	150

### 2.2.3 Multidisciplinary Engineering Tools

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002452 Geographic Information Systems: Basics Fieke Vancoillie -- Department of Environment	3			A:2	90
2	I002932 Machine Learning for Life Sciences [en] Willem Waegeman -- Department of Data Analysis and Mathematical Modelling	5			A:1	150
3	I001280 Experimental Design [en] Stijn Luca -- Department of Data Analysis and Mathematical Modelling	3			A:2	75
4	I003021 Advanced Biosystems Modelling [en] Paul Van Liedekerke -- Department of Data Analysis and Mathematical Modelling	5			A:2	150

## 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	I002720	Consumer Behaviour and Marketing of Bio-industrial products Wim Verbeke -- Department of Agricultural Economics	5		A:2	150
5	I001967	Intellectual Property and Valorization [en] Benedikt Sas -- Department of Food Technology, Safety and Health	3		A:2	90
6	C000833	Project Management Mario Vanhoucke -- Department of Business Informatics and Operations Management	4		A:2	120
7	F001006	Management Accounting and Control [en] Sophie Maussen -- Department of Accounting, Corporate Finance and Taxation	4		A:2	120

## 2.4 Skills and Attitudes

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

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 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 2025-2026	f: annually, from 2026-2027	i: annually, from 2027-2028
b: tri-annually	d: bi-annually, from 2025-2026	g: bi-annually, from 2026-2027	j: bi-annually, from 2027-2028
	e: tri-annually, from 2025-2026	h: tri-annually, from 2026-2027	k: tri-annually, from 2027-2028