



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 <i>Gijs Du Laing -- Department of Green Chemistry and Technology</i>	3		1	A:1	90
2	I002676	Analysis of Organic Micropollutants <i>Kristof Demeestere -- Department of Green Chemistry and Technology</i>	3		1	A:2	90
3	I002535	Applied Marine Ecology [en] <i>Colin Janssen -- Department of Animal Sciences and Aquatic Ecology</i>	3		1	A:1	90
4	I002606	Environmental Risk Assessment [en] <i>Karel De Schampheleere -- Department of Animal Sciences and Aquatic Ecology</i>	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] <i>Paul Van der Meeren -- Department of Green Chemistry and Technology</i>	5		1	A:1	150
2	I002672	Process Control [en] <i>Paul Van Liedekerke -- Department of Data Analysis and Mathematical Modelling</i>	5		1	A:2	150
3	I002682	Environmental Technology: Air <i>Christophe Walgraeve -- Department of Green Chemistry and Technology</i>	5		1	A:1	150
4	I002683	Environmental Technology: Soil <i>Ellen Van De Vijver -- Department of Environment</i>	5		1	A:1	150
5	I002607	Resource Recovery Technology [en] <i>Ramon Ganigüé -- Department of Biotechnology</i>	6		1	A:2	180
6	I002702	Clean Technology: Assessment Methods [en] <i>Sophie Huysveld -- Department of Green Chemistry and Technology</i>	3		1	A:1	90
7	I002684	Environmental Constructions in Practice <i>Eveline Volcke -- Department of Green Chemistry and Technology</i>	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] <i>Jeroen Buysse -- Department of Agricultural Economics</i>	4		2	A:1	120
2	I002685	Legal Framework for Environmental Technology <i>Hildegarde Deweerdt -- Department of Agricultural Economics</i>	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
1	F000752	Environmental Economics and Policy <i>Brent Bleys -- Department of Economics</i>	4			B:2	120
2	I001439	Environmental Noise [en] <i>Timothy Van Renterghem -- Department of Information Technology</i>	3			A:1	75
3	I002716	Environmental Impact Assessment <i>Sophie Huysveld -- Department of Green Chemistry and Technology</i>	4			A:2	120
4	I002748	Environmental Coordination <i>Hildegarde Deweerdt -- Department of Agricultural Economics</i>	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] <i>Filip Tack -- Department of Green Chemistry and Technology</i>	5			A:1	150
2	I002750	Isotopes in Biosciences [en] <i>Pascal Boeckx -- Department of Green Chemistry and Technology</i>	5			A:1	150
3	I002586	Multidisciplinary Analysis of Climate Change [en] <i>Pascal Boeckx -- Department of Green Chemistry and Technology</i>	3			A:2	90
4	I002691	Nature Conservation <i>Lander Baeten -- Department of Environment</i>	4			A:1	120
5	I002698	Water Quality Management [en] <i>Peter Goethals -- Department of Animal Sciences and Aquatic Ecology</i>	4			A:2	120
6	I002751	Principles of Quantitative Water Management <i>Niko Verhoest -- Department of Environment</i>	3			A:2	90
7	I002604	Oceans and Human Health [en] <i>Jana Asselman -- Department of Animal Sciences and Aquatic Ecology</i>	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] <i>Korneel Rabaey -- Department of Biotechnology</i>	6			A:1	180
2	I002752	Advanced Wastewater Treatment Process Design [en] <i>Eveline Volcke -- Department of Green Chemistry and Technology</i>	3			A:1	90
3	I002677	Thermochemical Conversion of Biomass <i>Frederik Ronse -- Department of Green Chemistry and Technology</i>	4			A:2	120
4	I002679	Green Chemistry of Renewable Resources [en] <i>Sven Mangelinckx -- Department of Green Chemistry and Technology</i>	4			A:1	120
5	I002510	Reaction Kinetics and Reactor Design <i>Paul Van der Meeren -- Department of Green Chemistry and Technology</i>	5			A:2	150

2.2.3 Multidisciplinary Engineering Tools

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

2.3 Entrepreneurship and Management

Nr	Course		CRDT	Ref	MT1	Session	Study
1	I001949	Entrepreneurship <i>Petra Andries -- Department of Marketing, Innovation and Organisation</i>	3			A:2	75
2	E076460	Dare to Venture [en] <i>Johan Verru -- Department of Marketing, Innovation and Organisation</i>	4			A:2	120

3	E076471	Dare to Start [en] <i>Wouter Haerick -- Department of Information Technology</i>	3		A:2	90
4	I002720	Consumer Behaviour and Marketing of Bio-industrial products <i>Wim Verbeke -- Department of Agricultural Economics</i>	5		A:2	150
5	I001967	Intellectual Property and Valorization [en] <i>Benedikt Sas -- Department of Food Technology, Safety and Health</i>	3		A:2	90
6	C000833	Project Management <i>Mario Vanhoucke -- Department of Business Informatics and Operations Management</i>	4		A:2	120
7	F001006	Management Accounting and Control [en] <i>Sophie Maussen -- Department of Accounting, Corporate Finance and Taxation</i>	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] <i>Paul Van der Meeren -- Department of Green Chemistry and Technology</i>	5	a		A:J	150
2	I002638	International Internship [en, nl] <i>Paul Van der Meeren -- Department of Green Chemistry and Technology</i>	5	a		A:J	150
3	I002639	Extended Internship [en, nl] <i>Paul Van der Meeren -- Department of Green Chemistry and Technology</i>	10	a		A:J	300
4	I002640	Extended International Internship [en, nl] <i>Paul Van der Meeren -- Department of Green Chemistry and Technology</i>	10	a		A:J	300
5	I001944	Bio-ethics [en] <i>Michiel De Proost -- Department of Philosophy and Moral Sciences</i>	3			A:1	75
6	C002668	Scientific Communication in English [en] <i>Geert Jacobs -- Department of Linguistics</i>	5			A:2	150
7	I001784	Seminar <i>Mieke Uyttendaele -- Department of Food Technology, Safety and Health</i>	3				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 <i>Kristof Demeestere -- Department of Green Chemistry and Technology</i>	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