

Faculty of Bioscience Engineering

Master of Science in Bioscience Engineering: Chemistry and Bioprocess Technology

Language of instruction: Dutch

Programme version 14

1 General Courses 58 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002675 Chemical Structure Determination [en] Christian Stevens -- Department of Green Chemistry and Technology	4		1	A:1	120
2	I002667 Colloid and Surface Chemistry Paul Van der Meeren -- Department of Green Chemistry and Technology	5		1	A:2	150
3	I002612 Industrial Biotechnology [en] Wim Soetaert -- Department of Biotechnology	5		1	A:1	150
4	I002668 Analytical Inorganic Chemistry: Instrumental Techniques Gijs Du Laing -- Department of Green Chemistry and Technology	3		1	A:1	90
5	I002618 Process Engineering 2 [en] Paul Van der Meeren -- Department of Green Chemistry and Technology	5		1	A:1	150
6	I002677 Thermochemical Conversion of Biomass Frederik Ronsse -- Department of Green Chemistry and Technology	4		1	A:2	120
7	I002678 Bio-organic Chemistry [en] Christian Stevens -- Department of Green Chemistry and Technology	4		1	A:1	120
8	I002679 Green Chemistry of Renewable Resources [en] Sven Mangelinckx -- Department of Green Chemistry and Technology	4		1	A:1	120
9	I002672 Process Control [en] Paul Van Liedekerke -- Department of Data Analysis and Mathematical Modelling	5		1	A:2	150
10	I002700 Clean Technology [en] Sophie Huysveld -- Department of Green Chemistry and Technology	5		1	A:1	150
11	I002680 Integrated Practical Classes in Advanced Organic Chemistry Christian Stevens -- Department of Green Chemistry and Technology	5		1	A:2	150
12	I002619 Management for Engineers [en] Jeroen Buysse -- Department of Agricultural Economics	4		2	A:1	120
13	I002652 Quality Management and Risk Analysis [en] Liesbeth Jacxsens -- Department of Food Technology, Safety and Health	5		2	A:2	150

2 Elective Courses 32 credits

Subscribe to 32 credit units from no less than 1 and no more than 6 module(s) from the following list. Subject to approval by the faculty.

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 Product Development and Renewable Resources

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002753 Chemistry of Natural Products [en] Sven Mangelinckx -- Department of Green Chemistry and Technology	5			A:1	150
2	E071341 Molecular Modelling of Industrial Processes [en] Veronique Van Speybroeck -- Department of Applied Physics	6			A:2	180
3	I002734 Crop Protection Chemistry Pieter Spanoghe -- Department of Plants and Crops	5			A:2	150

4	C004125	Advanced Organic Chemistry [en] Annemieke Madder -- Department of Organic Chemistry	6			A:1	180
5	C004151	Heterogeneous Catalysis [en] Pascal Van Der Voort -- Department of Chemistry	4			A:2	120

2.2 Chemical and/or Bioprocess Technology

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002631 Industrial Fermentation Processes and Downstream Processing [en] Wim Soetaert -- Department of Biotechnology	5			A:2	150
2	E039060 Sustainable Energy and Rational Use of Energy [en] Jeroen Beeckman -- Department of Electronics and Information Systems	4			A:2	120
3	I700265 Malting and Brewing Technology Jessika De Clippeleer -- Department of Biotechnology	4			A:1	120
4	I002607 Resource Recovery Technology [en] Ramon Ganigué -- Department of Biotechnology	6			A:2	180
5	I001561 Industrial Chemistry Sven Mangelinckx -- Department of Green Chemistry and Technology	3			A:2	75
6	I002776 Processes in Practice [en] Eveline Volcke -- Department of Green Chemistry and Technology	3			A:1	90
7	I003021 Advanced Biosystems Modelling [en] Paul Van Liedekerke -- Department of Data Analysis and Mathematical Modelling	5			A:2	150

2.3 Chemical Analysis

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002754 Environmental Chemistry: Organic Pollutants Christophe Walgraeve -- Department of Green Chemistry and Technology	3			A:1	90
2	I002750 Isotopes in Biosciences [en] Pascal Boeckx -- Department of Green Chemistry and Technology	5			A:1	150
3	I002728 Chemical Food Safety Bruno De Meulenaer -- Department of Food Technology, Safety and Health	5			(A:1) ^d	150

2.4 Entrepreneurship and Management

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I001967 Intellectual Property and Valorization [en] Benedikt Sas -- Department of Food Technology, Safety and Health	3			A:2	90
2	I001949 Entrepreneurship Petra Andries -- Department of Marketing, Innovation and Organisation	3			A:2	75
3	E076460 Dare to Venture [en] Johan Verrue -- Department of Marketing, Innovation and Organisation	4			A:2	120
4	E076471 Dare to Start [en] Frank Gielen -- Department of Information Technology	3			A:2	90
5	C000833 Project Management Mario Vanhoucke -- Department of Business Informatics and Operations Management	4			A:2	120
6	F000710 Supply Chain Management [en] Louis-Philippe Kerkhove -- Department of Business Informatics and Operations Management	6			A:2	180

2.5 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

2.6 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	I001480 Master's Dissertation Frederik Ronsse -- 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