

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] <i>Christian Stevens -- Department of Green Chemistry and Technology</i>	4		1	A:1	120
2	I002667 Colloid and Surface Chemistry <i>Paul Van der Meeren -- Department of Green Chemistry and Technology</i>	5		1	A:2	150
3	I002612 Industrial Biotechnology [en] <i>Wim Soetaert -- Department of Biotechnology</i>	5		1	A:1	150
4	I002668 Analytical Inorganic Chemistry: Instrumental Techniques <i>Gijs Du Laing -- Department of Green Chemistry and Technology</i>	3		1	A:1	90
5	I002618 Process Engineering 2 [en] <i>Paul Van der Meeren -- Department of Green Chemistry and Technology</i>	5		1	A:1	150
6	I002677 Thermochemical Conversion of Biomass <i>Frederik Ronsse -- Department of Green Chemistry and Technology</i>	4		1	A:2	120
7	I002678 Bio-organic Chemistry [en] <i>Christian Stevens -- Department of Green Chemistry and Technology</i>	4		1	A:1	120
8	I002679 Green Chemistry of Renewable Resources [en] <i>Sven Mangelinckx -- Department of Green Chemistry and Technology</i>	4		1	A:1	120
9	I002672 Process Control [en] <i>Paul Van Liedekerke -- Department of Data Analysis and Mathematical Modelling</i>	5		1	A:2	150
10	I002700 Clean Technology [en] <i>Sophie Huysveld -- Department of Green Chemistry and Technology</i>	5		1	A:1	150
11	I002680 Integrated Practical Classes in Advanced Organic Chemistry <i>Christian Stevens -- Department of Green Chemistry and Technology</i>	5		1	A:2	150
12	I002619 Management for Engineers [en] <i>Jeroen Buysse -- Department of Agricultural Economics</i>	4		2	A:1	120
13	I002652 Quality Management and Risk Analysis [en] <i>Liesbeth Jaxsens -- Department of Food Technology, Safety and Health</i>	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] <i>Sven Mangelinckx -- Department of Green Chemistry and Technology</i>	5			A:1	150
2	E071341 Molecular Modelling of Industrial Processes [en] <i>Veronique Van Speybroeck -- Department of Applied Physics</i>	6			A:2	180

3	I002734	Crop Protection Chemistry <i>Pieter Spanoghe -- Department of Plants and Crops</i>	5		A:2	150
4	C004125	Advanced Organic Chemistry [en] <i>Annemieke Madder -- Department of Organic Chemistry</i>	6		A:1	180
5	C004151	Heterogeneous Catalysis [en] <i>Pascal Van Der Voort -- Department of Chemistry</i>	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] <i>Wim Soetaert -- Department of Biotechnology</i>	5		A:2	150
2	E039060	Sustainable Energy and Rational Use of Energy [en] <i>Jeroen Beeckman -- Department of Electronics and Information Systems</i>	4		A:2	120
3	I700265	Malting and Brewing Technology <i>Jessika De Clippeleer -- Department of Biotechnology</i>	4		A:1	120
4	I002607	Resource Recovery Technology [en] <i>Ramon Ganigué -- Department of Biotechnology</i>	6		A:2	180
5	I001561	Industrial Chemistry <i>Sven Mangelinckx -- Department of Green Chemistry and Technology</i>	3		A:2	75
6	I002776	Processes in Practice [en] <i>Eveline Volcke -- Department of Green Chemistry and Technology</i>	3		A:1	90
7	I003021	Advanced Biosystems Modelling [en] <i>Paul Van Liedekerke -- Department of Data Analysis and Mathematical Modelling</i>	5		A:2	150

2.3 Chemical Analysis

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

2.4 Entrepreneurship and Management

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

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 <i>Frederik Ronsse -- 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