

Study Programme

Academic year 2024-2025

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	1002675	Chemical Structure Determination [en] Christian Stevens Department of Green Chemistry and Technology	4	1	A:1	120
2	1002667	Colloid and Surface Chemistry Paul Van der Meeren Department of Green Chemistry and Technology	5	1	A:2	150
3	1002612	Industrial Biotechnology [en] Wim Soetaert Department of Biotechnology	5	1	A:1	150
4	1002668	Analytical Inorganic Chemistry: Instrumental Techniques Gijs Du Laing Department of Green Chemistry and Technology	3	1	A:1	90
5	1002618	Process Engineering 2 [en] Paul Van der Meeren Department of Green Chemistry and Technology	5	1	A:1	150
6	1002677	Thermochemical Conversion of Biomass Frederik Ronsse Department of Green Chemistry and Technology	4	1	A:2	120
7	1002678	Bio-organic Chemistry [en] Christian Stevens Department of Green Chemistry and Technology	4	1	A:1	120
8	1002679	Green Chemistry of Renewable Resources [en] Sven Mangelinckx Department of Green Chemistry and Technology	4	1	A:1	120
9	1002672	Process Control [en] Paul Van Liedekerke Department of Data Analysis and Mathematical Modelling	5	1	A:2	150
10	1002700	Clean Technology [en] Sophie Huysveld Department of Green Chemistry and Technology	5	1	A:1	150
11	1002680	Integrated Practical Classes in Advanced Organic Chemistry Christian Stevens Department of Green Chemistry and Technology	5	1	A:2	150
12	1002619	Management for Engineers [en] Jeroen Buysse Department of Agricultural Economics	4	2	A:1	120
13	1002652	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	1002753	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	1002734	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	1002631	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	1700265	Malting and Brewing Technology Jessika De Clippeleer Department of Biotechnology	4			A:1	120
4	1002607	Resource Recovery Technology [en] Ramon Ganigué Department of Biotechnology	6			A:2	180
5	1001561	Industrial Chemistry Sven Mangelinckx Department of Green Chemistry and Technology	3			A:2	75
6	1002776	Processes in Practice [en] Eveline Volcke Department of Green Chemistry and Technology	3			A:1	90
7	1003021	Advanced Biosystems Modelling [en] Paul Van Liedekerke Department of Data Analysis and Mathematical Modelling	5			A:2	150
2.3	2.3 Chemical Analysis						

Nr	Nr Course			Ref	MT1	Session	Study
1	1002754	Environmental Chemistry: Organic Polluents Christophe Walgraeve Department of Green Chemistry and Technology	3			A:1	90
2	1002750	Isotopes in Biosciences [en] Pascal Boeckx Department of Green Chemistry and Technology	5			A:1	150
3	1002728	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	1001967	Intellectual Property and Valorization [en] Benedikt Sas Department of Food Technology, Safety and Health	3			A:2	90
2	1001949	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] Wouter Haerick 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.

N			CRDT		Session	Study
1	1002637	Internship [en, nl] Paul Van der Meeren Department of Green Chemistry and Technology	5	а	A:J	150
2	1002638	International Internship [en, nl] Paul Van der Meeren Department of Green Chemistry and Technology	5	а	A:J	150
3	1002639	Extended Internship [en, nl] Paul Van der Meeren Department of Green Chemistry and Technology	10	а	A:J	300
4	1002640	Extended International Internship [en, nl] Paul Van der Meeren Department of Green Chemistry and Technology	10	а	A:J	300

5	1001944	Bio-ethics [en] Michiel De Proost 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	1001784	Seminar [en, nl] Mieke Uyttendaele Department of Food Technology, Safety and Health	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 <u>Ghent University</u> <u>Elective Courses</u>.

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	1001480	Master's Dissertation	30		2	A:J	900
		Frederik Ronsse Department of Green Chemistry and Technology					

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 cours name, using the following ISO codes:

bg: Bulgarian de: German es: Spanish ja: Japanese pl: cs: Czech el: Greek fr: French nl: Dutch pt: da: Danish en: English it: Italian no: Norwegian ru:	Polishsh: Kroatian/Serbianzh: ChinesePortuguesesl: SloveneRussiansv: Swedish
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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 in 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
b: tri-annually	d: bi-annually, from 2025-2026
	e: tri-annually, from 2025-2026

f: annually, from 2026-2027 g: bi-annually, from 2026-2027 h: tri-annually, from 2026-2027

i: annually, from 2027-2028 j: bi-annually, from 2027-2028 k: tri-annually, from 2027-2028