

Faculty of Bioscience Engineering

Master of Science in Bioscience Engineering: Chemistry and Bioprocess Technology

Language of instruction: Dutch

Programme version 13

## 1 General Courses 58 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002675 Chemical Structure Determination 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, nl] 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 Kimberly Tumlos Solon -- Department of Data Analysis and Mathematical Modelling	5		1	A:2	150
10	I002700 Clean Technology [en] Pieter Nachtergaele -- 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, nl] 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 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	I002673	Packaging Technology [en] Peter Ragaert -- Department of Food Technology, Safety and Health	5		A:2	150
3	I002719	Modelling and Simulation with Partial Differential Equations in Practice [en] Ingmar Nopens -- Department of Data Analysis and Mathematical Modelling	5		A:1	150
4	I002669	Food Technology [en] Koen Dewettinck -- Department of Food Technology, Safety and Health	5		A:1	150
5	E039060	Sustainable Energy and Rational Use of Energy [en] Jeroen Beeckman -- Department of Electronics and Information Systems	4		A:2	120
6	I700265	Malting and Brewing Technology Jessika De Clippeleer -- Department of Biotechnology	4		A:1	120
7	I002607	Resource Recovery Technology [en] Ramon Ganigué -- Department of Biotechnology	6		A:2	180
8	I001561	Industrial Chemistry Sven Mangelinckx -- Department of Green Chemistry and Technology	3		A:2	75
9	I002776	Processes in Practice [en] Eveline Volcke -- Department of Green Chemistry and Technology	3		A:1	90

## 2.3 Chemical Analysis

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I001398	Instrumental Organic Analysis [en] Sven Mangelinckx -- Department of Green Chemistry and Technology	3		A:2	75
2	I002754	Environmental Chemistry: Organic Pollutants Christophe Walgraeve -- Department of Green Chemistry and Technology	3		A:1	90
3	I002750	Isotopes in Biosciences [en] Pascal Boeckx -- Department of Green Chemistry and Technology	5		A:1	150
4	I002670	Biochemical and Functional Analysis of Foods Bruno De Meulenaer -- Department of Food Technology, Safety and Health	5		A:1	150
5	I002728	Chemical Food Safety Bruno De Meulenaer -- Department of Food Technology, Safety and Health	5		A:1 <sup>a</sup>	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] Tarik Aouam -- Department of Business Informatics and Operations Management	6		A:2	180
7	E076930	Financial and Cost Price Reporting in Companies Faculteit Economie en Bedrijfskunde, Sophie Maussen -- Department of Accounting, Corporate Finance and Taxation	6		A:1	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
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1	I002637	Internship [en, nl] Tom Desmet -- Department of Biotechnology	5	a	A:J	150
2	I002638	International Internship [en, nl] Tom Desmet -- Department of Biotechnology	5	a	A:J	150
3	I002639	Extended Internship [en, nl] Tom Desmet -- Department of Biotechnology	10	a	A:J	300
4	I002640	Extended International Internship [en, nl] Tom Desmet -- Department of Biotechnology	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

## 2.6 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 2022-2023	f: annually, from 2023-2024	i: annually, from 2024-2025
b: tri-annually	d: bi-annually, from 2022-2023	g: bi-annually, from 2023-2024	j: bi-annually, from 2024-2025
	e: tri-annually, from 2022-2023	h: tri-annually, from 2023-2024	k: tri-annually, from 2024-2025