

Faculty of Bioscience Engineering

Master of Science in Bioscience Engineering: Chemistry and Bioprocess Technology

Language of instruction: Dutch

Programme version 16

1 General Courses 59 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I003079 Chemical Structure Determination [en] <i>Christian Stevens -- Department of Green Chemistry and Technology</i>	4		1	A:1	120
2	I002612 Industrial Biotechnology [en] <i>Wim Soetaert -- Department of Biotechnology</i>	5		1	A:1	150
3	I002668 Analytical Inorganic Chemistry: Instrumental Techniques <i>Gijs Du Laing -- Department of Green Chemistry and Technology</i>	3		1	A:1	90
4	I003071 Process Engineering 2 [en] <i>Paul Van der Meeren -- Department of Green Chemistry and Technology</i>	5		1	A:1	150
5	I002678 Bio-organic Chemistry [en] <i>Christian Stevens -- Department of Green Chemistry and Technology</i>	4		1	A:1	120
6	I003060 Sustainable Systems Engineering [en] <i>Jo Dewulf -- Department of Green Chemistry and Technology</i>	5		1	A:1	150
7	I003068 Management for Engineers [en] <i>Jeroen Buysse -- Department of Agricultural Economics</i>	4		1	A:1	120
8	I002667 Colloid and Surface Chemistry <i>Paul Van der Meeren -- Department of Green Chemistry and Technology</i>	5		1	A:2	150
9	I002677 Thermochemical Conversion of Biomass <i>Stef Ghysels -- Department of Green Chemistry and Technology</i>	4		1	A:2	120
10	I003080 Process Control [en] <i>Paul Van Liedekerke -- Department of Data Analysis and Mathematical Modelling</i>	5		1	A:2	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	I002512 Chemistry and Technology of Polymers <i>Christian Stevens -- Department of Green Chemistry and Technology</i>	5		2	(A:1) ^c	150
13	I003081 Quality Management and Risk Analysis <i>Liesbeth Jacxsens -- Department of Food Technology, Safety and Health</i>	5		2	A:2	150

2 Elective Courses 31 credits

Subscribe to 31 credit units from 2 modules from the following list, of which at least 16 credit units from module 2.1. and at least 5 credit units from module 2.2.

2.1 Discipline-Specific Courses

Subscribe to no less than 16 credit units from the following list.

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	I003107 Crop Protection Chemistry <i>Pieter Spanoghe -- Department of Plants and Crops</i>	3			A:2	90
3	C004125 Advanced Organic Chemistry [en] <i>Annemieke Madder -- Department of Organic Chemistry</i>	6			A:1	180

4	C004151	Heterogeneous Catalysis [en] <i>Pascal Van Der Voort -- Department of Chemistry</i>	4			A:2	120
5	I002631	Industrial Fermentation Processes and Downstream Processing [en] <i>Wim Soetaert -- Department of Biotechnology</i>	5			A:2	150
6	I700265	Malting and Brewing Technology <i>Jessika De Clippeleer -- Department of Biotechnology</i>	4			A:1	120
7	I002607	Resource Recovery Technology [en] <i>Jo De Vrieze -- Department of Biotechnology</i>	6			A:2	180
8	I001561	Industrial Chemistry <i>Sven Mangelinckx -- Department of Green Chemistry and Technology</i>	3			A:2	75
9	I002776	Processes in Practice [en] <i>Eveline Volcke -- Department of Green Chemistry and Technology</i>	3			A:1	90
10	I002754	Environmental Chemistry: Organic Pollutants <i>Christophe Walgraeve -- Department of Green Chemistry and Technology</i>	3			A:1	90

2.2 Cross-Disciplinary Elective Courses

Subscribe to no less than 5 and no more than 15 credit units from no less than 1 and no more than 2 module(s) from the following list. A minimum of 5 credit units is required from module 2.1.1 "Cross-Disciplinary Elective Set for Bioscience Engineers" Courses for which the final competencies are already (largely) achieved by another course in the curriculum cannot be included as part of the elective set.
Subject to approval by the faculty.

2.2.1 Elective Set

2.2.1.1 Cross-Disciplinary Elective Set for Bioscience Engineers

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	I003053 Machine Learning for Life Sciences [en] <i>Willem Waegeman -- Department of Data Analysis and Mathematical Modelling</i>	4			A:1	120
2	I003054 Computer Vision for Life Sciences [en] <i>Jan Verwaeren -- Department of Data Analysis and Mathematical Modelling</i>	5			A:2	150
3	I003021 Advanced Biosystems Modelling [en] <i>Paul Van Liedekerke -- Department of Data Analysis and Mathematical Modelling</i>	5			A:1	150
4	I001280 Experimental Design [en] <i>Stijn Luca -- Department of Data Analysis and Mathematical Modelling</i>	3			A:2	75
5	I003068 Management for Engineers [en] <i>Jeroen Buysse -- Department of Agricultural Economics</i>	4			A:1	120
6	I002718 Economics and Management of Natural Resources [en] <i>Stijn Speelman -- Department of Agricultural Economics</i>	4			A:2	120
7	I002750 Isotopes in Biosciences [en] <i>Pascal Boeckx -- Department of Green Chemistry and Technology</i>	5			A:1	150
8	I003055 Biodiversity and Nature Conservation <i>Lander Baeten -- Department of Environment</i>	4			A:1	120
9	I002586 Multidisciplinary Analysis of Climate Change [en] <i>Pascal Boeckx -- Department of Green Chemistry and Technology</i>	3			A:2	90
10	I003056 Human Nutrition and Health [en] <i>John Van Camp -- Department of Food Technology, Safety and Health</i>	5			A:1	150
11	I002758 Food Marketing and Consumer Behaviour [en] <i>Wim Verbeke -- Department of Agricultural Economics</i>	5			A:1	150
12	I003067 Bioethics [en] <i>Michiel De Proost -- Department of Philosophy and Moral Sciences</i>	3			A:1	75
13	I002637 Internship [en, nl] <i>Peter Ragaert -- Department of Food Technology, Safety and Health</i>	5	A		A:J	150
14	I002638 International Internship [en, nl] <i>Peter Ragaert -- Department of Food Technology, Safety and Health</i>	5	A		A:J	150
15	I002639 Extended Internship [en, nl] <i>Peter Ragaert -- Department of Food Technology, Safety and Health</i>	10	A		A:J	300
16	I002640 Extended International Internship [en, nl] <i>Peter Ragaert -- Department of Food Technology, Safety and Health</i>	10	A		A:J	300

2.2.2 Open Choice

Subscribe to course units from courses offered at Ghent University, including the [Ghent University Elective Courses](#).
Maximum 8 credit units language courses are allowed within this master programme.

3 Master's Dissertation

30 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I001480 Master's Dissertation <i>Thomas Heugebaert -- 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 2027-2028	f: annually, from 2028-2029	i: annually, from 2029-2030
b: tri-annually	d: bi-annually, from 2027-2028	g: bi-annually, from 2028-2029	j: bi-annually, from 2029-2030
	e: tri-annually, from 2027-2028	h: tri-annually, from 2028-2029	k: tri-annually, from 2029-2030