

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 ^a | 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] Michiel De Proost -- Department of Philosophy and Moral Sciences | 3 | | | A:1 | 75 |

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|---|---------|---|---|--|-----|-----|
| 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 2026-2027 | f: annually, from 2027-2028 | i: annually, from 2028-2029 |
| b: tri-annually | d: bi-annually, from 2026-2027 | g: bi-annually, from 2027-2028 | j: bi-annually, from 2028-2029 |
| | e: tri-annually, from 2026-2027 | h: tri-annually, from 2027-2028 | k: tri-annually, from 2028-2029 |