

Faculty of Bioscience Engineering

Master of Science in Bioscience Engineering: Chemistry and Bioprocess Technology

Language of instruction: Dutch

Programme version 15

1 General Courses 58 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 | I002679 Green Chemistry of Renewable Resources | 4 | | 1 | | 120 |
| 7 | I003060 Sustainable Systems Engineering [en] <i>Sophie Huysveld -- Department of Green Chemistry and Technology</i> | 5 | | 1 | A:1 | 150 |
| 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 | I003068 Management for Engineers [en] <i>Jeroen Buysse -- Department of Agricultural Economics</i> | 4 | | 2 | A:1 | 120 |
| 13 | I003081 Quality Management and Risk Analysis <i>Liesbeth Jacobsens -- 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.

2.1 Product Development and Renewable Resources

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1 | I002753 Chemistry of Natural Products [en] <i>Sven Mangelincx -- 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 | 5 | | | | 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>Filip Strubbe -- Department of Electronics and Information Systems</i> | 4 | | | A:2 | 120 |
| 3 | I700265 Malting and Brewing Technology <i>Jessika De Clippeler -- Department of Biotechnology</i> | 4 | | | A:1 | 120 |
| 4 | I002607 Resource Recovery Technology [en] <i>Ramon Ganigúe -- Department of Biotechnology</i> | 6 | | | A:2 | 180 |
| 5 | I001561 Industrial Chemistry <i>Sven Mangelincx -- 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:1 | 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 |

2.4 Entrepreneurship and Management

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1 | I001967 Intellectual Property and Valorization | 3 | | | | 90 |
| 2 | I001949 Entrepreneurship | 3 | | | | 75 |
| 3 | F001022 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>Peter Ragaert -- Department of Food Technology, Safety and Health</i> | 5 | a | | A:J | 150 |
| 2 | I002638 International Internship [en, nl] <i>Peter Ragaert -- Department of Food Technology, Safety and Health</i> | 5 | a | | A:J | 150 |
| 3 | I002639 Extended Internship [en, nl] <i>Peter Ragaert -- Department of Food Technology, Safety and Health</i> | 10 | a | | A:J | 300 |
| 4 | I002640 Extended International Internship [en, nl] <i>Peter Ragaert -- Department of Food Technology, Safety and Health</i> | 10 | a | | A:J | 300 |
| 5 | I003067 Bioethics [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 | 3 | | | | 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.

| 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 |