

Faculty of Sciences

Bachelor of Science in Biochemistry and Biotechnology

Language of instruction: Dutch

Programme version 15

1 General Courses 144 credits

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1 | C000514 Mathematics I <i>Koen Thas -- Department of Mathematics: Algebra and Geometry</i> | 5 | | 1 | A:1 | 142 |
| 2 | C001837 Mathematics II <i>Koen Thas -- Department of Mathematics, Computer Science and Statistics</i> | 5 | | 1 | A:2 | 142 |
| 3 | C000057 Physics I <i>Bartel Van Waeyenberge -- Department of Solid State Sciences</i> | 5 | | 1 | A:1 | 150 |
| 4 | C000673 Physics II <i>Bartel Van Waeyenberge -- Department of Solid State Sciences</i> | 5 | | 1 | A:2 | 150 |
| 5 | C004091 General Chemistry <i>Isabel Van Driessche -- Department of Chemistry</i> | 10 | | 1 | A:J | 284 |
| 6 | C003943 Chemical Structures <i>Zeger Hens -- Department of Chemistry</i> | 5 | | 1 | A:1 | 134 |
| 7 | C003481 Biodiversity of Plants s.L. (sensu Linnaeo) <i>Annemieke Verbeken -- Department of Biology</i> | 5 | | 1 | A:1 | 138 |
| 8 | C003761 Biodiversity of Animals <i>Tom Moens -- Department of Biology</i> | 5 | | 1 | A:2 | 138 |
| 9 | C003945 General Cell Biology <i>Geert Berx -- Department of Molecular Biology</i> | 5 | | 1 | A:1 | 140 |
| 10 | C003944 General Biochemistry: Molecules of Life <i>Bart Devreese -- Department of Biochemistry, Physiology and Microbiology</i> | 5 | | 1 | A:2 | 125 |
| 11 | C003390 Introduction to Life Sciences <i>Peter Vandenabeele -- Department of Molecular Biology</i> | 5 | | 1 | A:2 | 150 |
| 12 | C004408 Introduction to Biostatistics <i>Lieven Clement -- Department of Mathematics, Computer Science and Statistics</i> | 5 | | 2 | A:1 | 138 |
| 13 | C001815 Organic Chemistry: Introduction to Reactivity <i>Johan Winne -- Department of Organic Chemistry</i> | 5 | | 2 | A:1 | 148 |
| 14 | C002140 Analytical Chemistry <i>Mieke Adriaens -- Department of Chemistry</i> | 5 | | 2 | A:1 | 149 |
| 15 | C003361 General Microbiology <i>Peter Vandamme -- Department of Biochemistry, Physiology and Microbiology</i> | 4 | | 2 | A:1 | 107 |
| 16 | C003362 Molecular Biology I <i>Wim Declercq -- Department of Molecular Biology</i> | 4 | | 2 | A:1 | 117 |
| 17 | C003080 Programming <i>Peter Dawyndt -- Department of Mathematics, Computer Science and Statistics</i> | 5 | UKV | 2 | A:1 | 150 |
| 18 | C003364 Integrated Practicum: Basic Analysis of Microbial and Eukaryotic Cells <i>Peter Vandamme -- Department of Biochemistry, Physiology and Microbiology</i> | 3 | | 2 | A:1 | 75 |
| 19 | C000227 Plant Physiology <i>Dominique Van Der Straeten -- Department of Biology</i> | 5 | | 2 | A:2 | 145 |
| 20 | C002369 Biomedical Physiology <i>Dirk de Graaf -- Department of Biochemistry, Physiology and Microbiology</i> | 5 | | 2 | A:2 | 145 |

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|----|---------|---|---|---|-----|-----|
| 21 | C003365 | Biochemistry: Metabolism I <i>Bart Devreese -- Department of Biochemistry, Physiology and Microbiology</i> | 4 | 2 | A:2 | 105 |
| 22 | C003366 | Gene Technology I <i>Lieven De Veylder -- Department of Plant Biotechnology and Bioinformatics</i> | 4 | 2 | A:2 | 110 |
| 23 | C003367 | Genetics I <i>Sofie Goormachtig -- Department of Plant Biotechnology and Bioinformatics</i> | 4 | 2 | A:2 | 120 |
| 24 | C003946 | Integrated Practicum: Basic Biotechnology <i>Wim Declercq -- Department of Molecular Biology</i> | 3 | 2 | A:2 | 90 |
| 25 | C003379 | Immunology <i>Martin Guillems -- Department of Molecular Biology</i> | 4 | 2 | A:2 | 109 |
| 26 | C003369 | Biochemistry: Metabolism II <i>Leander Meuris -- Department of Biochemistry, Physiology and Microbiology</i> | 4 | 3 | A:1 | 107 |
| 27 | C003370 | Molecular Biology II <i>Rudi Beyaert -- Department of Molecular Biology</i> | 4 | 3 | A:1 | 105 |
| 28 | C004096 | Molecular Cell Biology [en] <i>Roosmarijn Vandenbroucke -- Department of Molecular Biology</i> | 5 | 3 | A:1 | 130 |
| 29 | C003372 | Genetics II <i>Wout Boerjan -- Department of Plant Biotechnology and Bioinformatics</i> | 4 | 3 | A:1 | 120 |
| 30 | C003375 | Integrated Practicum: Advanced Biotechnology, Part I <i>Daniël Van Damme -- Department of Plant Biotechnology and Bioinformatics</i> | 3 | 3 | A:1 | 75 |
| 31 | C003376 | Microbial Evolution and Diversity <i>Peter Vandamme -- Department of Biochemistry, Physiology and Microbiology</i> | 4 | 3 | A:1 | 108 |

2 Elective Courses

36 credits

Subscribe to 1 module from the following list. Subject to approval by the faculty.
Students who have followed the Educational Track, can enter directly into the educational master's programme.

2.1 Research Track

Subscribe to 4 credit units from 1 module from the following list.

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1 | C004097 Analytical Biochemistry [en, nl] <i>Bart Devreese -- Department of Biochemistry, Physiology and Microbiology</i> | 3 | | 3 | A:1 | 90 |
| 2 | C003374 Integrated Practicum: Biochemistry-Microbiology <i>Bart Devreese -- Department of Biochemistry, Physiology and Microbiology</i> | 3 | | 3 | A:1 | 90 |
| 3 | C003377 Plant Molecular Biology [en, nl] <i>Lieven De Veylder -- Department of Plant Biotechnology and Bioinformatics</i> | 4 | | 3 | A:2 | 109 |
| 4 | C003762 Developmental Biology <i>Tom Beeckman -- Department of Plant Biotechnology and Bioinformatics</i> | 4 | | 3 | A:2 | 109 |
| 5 | C004092 Bioinformatics I [en] <i>Kathleen Marchal -- Department of Plant Biotechnology and Bioinformatics</i> | 4 | | 3 | A:2 | 120 |
| 6 | C003378 Gene Technology II <i>Geert Berx -- Department of Molecular Biology</i> | 4 | | 3 | A:2 | 115 |
| 7 | C003763 Integrated Practicum: Advanced Biotechnology, Part II <i>Jonathan Maelfait -- Department of Molecular Biology</i> | 4 | | 3 | A:2 | 100 |
| 8 | C003382 Bachelor's Project <i>Anne Willems -- Department of Biochemistry, Physiology and Microbiology</i> | 6 | | 3 | A:2 | 165 |

2.1.1 Elective Course List

Subscribe to no less than 4 credit units from the following list.

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1 | C002668 Scientific Communication in English [en] <i>Geert Jacobs -- Department of Linguistics</i> | 5 | | 3 | A:2 | 150 |
| 2 | C004395 Professional Literature [en] <i>Lien Van Hoecke -- Department of Molecular Biology</i> | 4 | | 3 | A:2 | 120 |

2.1.2 Elective Courses UGent and other universities

Subscribe to 4 credit units from the bachelor's programmes of UGent or (online) courses from [Erasmus+ partner universities](#), distributed over the first standard learning path as follows: 4 credit units in year 3.

2.2 Educational Track

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--------|------|-----|-----|---------|-------|
|----|--------|------|-----|-----|---------|-------|

| | | | | | | |
|---|---------|--|---|---|-----|-----|
| 1 | H002169 | Powerful Learning Environments <i>Bram De Wever -- Department of Educational Studies</i> | 6 | 3 | A:1 | 180 |
| 2 | H002175 | Teaching Methodology: Sciences <i>Katrien Strubbe -- Department of Chemistry</i> | 6 | 3 | A:J | 180 |
| 3 | H002170 | Reference Internship: Sciences <i>Katrien Strubbe -- Department of Chemistry</i> | 3 | 3 | A:J | 90 |
| 4 | C004092 | Bioinformatics I [en] <i>Kathleen Marchal -- Department of Plant Biotechnology and Bioinformatics</i> | 4 | 3 | A:2 | 120 |
| 5 | C003378 | Gene Technology II <i>Geert Berx -- Department of Molecular Biology</i> | 4 | 3 | A:2 | 115 |
| 6 | C003763 | Integrated Practicum: Advanced Biotechnology, Part II <i>Jonathan Maelfait -- Department of Molecular Biology</i> | 4 | 3 | A:2 | 100 |
| 7 | C003382 | Bachelor's Project <i>Anne Willems -- Department of Biochemistry, Physiology and Microbiology</i> | 6 | 3 | A:2 | 165 |

2.2.1 Elective Courses Biochemistry and Biotechnology

[Subscribe to 4 credit units from the following list.](#)

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1 | C003377 Plant Molecular Biology [en, nl] <i>Lieven De Veylder -- Department of Plant Biotechnology and Bioinformatics</i> | 4 | | 3 | A:2 | 109 |
| 2 | C003762 Developmental Biology <i>Tom Beeckman -- Department of Plant Biotechnology and Bioinformatics</i> | 4 | | 3 | A:2 | 109 |

2.3 Research-Internationalisation Track (GUGC, South-Korea)

[1st semester courses are taught at UGent.](#)

[2nd semester courses are taught at GUGC \(South-Korea\).](#)

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1 | C004097 Analytical Biochemistry [en, nl] <i>Bart Devreese -- Department of Biochemistry, Physiology and Microbiology</i> | 3 | | 3 | A:1 | 90 |
| 2 | C003374 Integrated Practicum: Biochemistry-Microbiology <i>Bart Devreese -- Department of Biochemistry, Physiology and Microbiology</i> | 3 | | 3 | A:1 | 90 |
| 3 | O000180 Bioinformatics 2 [en] <i>Zhen Li -- Department of Plant Biotechnology and Bioinformatics</i> | 5 | | 3 | A:2 | 150 |
| 4 | O000145 Plant Biotechnology [en] <i>Laurens Pauwels -- Department of Biotechnology</i> | 4 | | 3 | A:2 | 108 |
| 5 | O000024 Economics and Marketing [en] <i>Christine Yung Hung -- Department of Agricultural Economics</i> | 5 | | 3 | A:2 | 150 |
| 6 | O000165 Bachelor's Project [nl, en] <i>Michael Dunne -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 12 | | 3 | B:2 | 360 |

2.3.1 Elective Course List

[Subscribe to 1 courses from the following list.](#)

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1 | C003762 Developmental Biology <i>Tom Beeckman -- Department of Plant Biotechnology and Bioinformatics</i> | 4 | | 3 | A:2 | 109 |
| 2 | C003377 Plant Molecular Biology [en, nl] <i>Lieven De Veylder -- Department of Plant Biotechnology and Bioinformatics</i> | 4 | | 3 | A:2 | 109 |
| 3 | O000168 Experimental Food Biochemistry [en] <i>Mahta Mirzaei -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 3 | A:2 | 150 |

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 2025-2026 | f: annually, from 2026-2027 | i: annually, from 2027-2028 |
| b: tri-annually | d: bi-annually, from 2025-2026 | g: bi-annually, from 2026-2027 | j: bi-annually, from 2027-2028 |
| | e: tri-annually, from 2025-2026 | h: tri-annually, from 2026-2027 | k: tri-annually, from 2027-2028 |