

Faculty of Sciences

Bachelor of Science in Biochemistry and Biotechnology

Language of instruction: Dutch

Programme version 14

## 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: Algebra and Geometry</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	B: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

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 Guillaams -- 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 <i>Lieven De Veylder -- Department of Plant Biotechnology and Bioinformatics</i>	4		3	A:2	109
4	C003762 Developmental Biology <i>Kris Vleminckx -- Department of Molecular Biology</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>Mathieu Bertrand -- Department of Molecular Biology</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>Mathieu Bertrand -- Department of Molecular Biology</i>	4		3	A:2	120

#### 2.1.2 Elective Courses UGent

Subscribe to 4 credit units from the bachelor's programmes of UGent, 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 <b>Powerful Learning Environments</b> <i>Bram De Wever -- Department of Educational Studies</i>	6		3	A:1	180
2	H002175 <b>Teaching Methodology: Sciences</b> <i>Katrien Strubbe -- Department of Chemistry</i>	6		3	A:J	180
3	H002170 <b>Reference Internship: Sciences</b> <i>Katrien Strubbe -- Department of Chemistry</i>	3		3	A:J	90
4	C004092 <b>Bioinformatics I [en]</b> <i>Kathleen Marchal -- Department of Plant Biotechnology and Bioinformatics</i>	4		3	A:2	120
5	C003378 <b>Gene Technology II</b> <i>Geert Berx -- Department of Molecular Biology</i>	4		3	A:2	115
6	C003763 <b>Integrated Practicum: Advanced Biotechnology, Part II</b> <i>Jonathan Maelfait -- Department of Molecular Biology</i>	4		3	A:2	100
7	C003382 <b>Bachelor's Project</b> <i>Mathieu Bertrand -- Department of Molecular Biology</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 <b>Plant Molecular Biology</b> <i>Lieven De Veylder -- Department of Plant Biotechnology and Bioinformatics</i>	4		3	A:2	109
2	C003762 <b>Developmental Biology</b> <i>Kris Vleminckx -- Department of Molecular Biology</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 <b>Analytical Biochemistry [en, nl]</b> <i>Bart Devreese -- Department of Biochemistry, Physiology and Microbiology</i>	3		3	A:1	90
2	C003374 <b>Integrated Practicum: Biochemistry-Microbiology</b> <i>Bart Devreese -- Department of Biochemistry, Physiology and Microbiology</i>	3		3	A:1	90
3	O000180 <b>Bioinformatics 2 [en]</b> <i>Zhen Li -- Department of Plant Biotechnology and Bioinformatics</i>	5		3	A:2	150
4	O000145 <b>Plant Biotechnology [en]</b> <i>Godelieve Gheysen -- Department of Biotechnology</i>	4		3	A:2	108
5	O000024 <b>Economics and Marketing [en]</b> <i>Christine Yung Hung -- Department of Agricultural Economics</i>	5		3	A:2	150
6	O000165 <b>Bachelor's Project [en]</b> <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 <b>Developmental Biology</b> <i>Kris Vleminckx -- Department of Molecular Biology</i>	4		3	A:2	109
2	C003377 <b>Plant Molecular Biology</b> <i>Lieven De Veylder -- Department of Plant Biotechnology and Bioinformatics</i>	4		3	A:2	109
3	O000168 <b>Experimental Food Biochemistry [en]</b> <i>Mahta Mirzaei -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i>	5		3	A:2	150
4	O000167 <b>Reflection on Sustainable Development [en]</b>	5		3	A:2	125

## 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 2023-2024	f: annually, from 2024-2025	i: annually, from 2025-2026
b: tri-annually	d: bi-annually, from 2023-2024	g: bi-annually, from 2024-2025	j: bi-annually, from 2025-2026
	e: tri-annually, from 2023-2024	h: tri-annually, from 2024-2025	k: tri-annually, from 2025-2026