

Faculty of Sciences, Faculty of Psychology and Educational Sciences
Master of Science in Teaching in Science and Technology -- Biology

Language of instruction: Dutch

Programme version 5

1 Domain Component

54 credits

For courses without indication of the standard learning path, the student can choose whether to take the course in the first or second year, depending on the rest of his/her curriculum.

1.1 General Courses

13 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C003080 Programming [en] <i>Peter Dawyndt -- Department of Mathematics, Computer Science and Statistics</i>	5	UKV		C:1	150
2	C003302 Academic Grant Writing [en] <i>Matthew Shawkey -- Department of Biology</i>	3			A:2	90
3	C003334 Scientific Communication [en] <i>Danny Haelewaters -- Department of Biology</i>	5			A:1	150

1.2 Major General Biology

29 credits

[Subscribe to 29 credit units from the following list.](#)

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C003310 Taxonomy and Systematics [en] <i>Koen Sabbe -- Department of Biology</i>	4		1	A:1	120
2	C003311 Phylogenetics [en] <i>Olivier De Clerck -- Department of Biology</i>	4		1	A:1	120
3	C003312 Integrated Biodiversity Research Project [en] <i>Kenny Bogaert -- Department of Biology</i>	5		1	A:2	150
4	C003313 Biodiversity Patterns in Space and Time [en] <i>Koen Sabbe -- Department of Biology</i>	4		2	A:1	120
5	C003314 Paleobiology [en] <i>Thijs Vandenbroucke -- Department of Geology</i>	5		1	A:1	150
6	C003315 Biodiversity Conservation [en] <i>Ana Rita Giraldes Simoes -- Department of Biology</i>	4		1	A:2	120
7	C003316 Microevolution and Speciation [en] <i>Frederik Hendrickx -- Department of Biology</i>	6		1	A:1	180
8	C004274 Evolutionary Morphology [en] <i>Lars Chatrou -- Department of Biology</i>	5		2	A:1	150
9	C003319 Evolutionary Developmental Biology [en] <i>Paul Witten -- Department of Biology</i>	5		1	A:2	150
10	C003320 Climate Change [en] <i>Dirk Verschuren -- Department of Biology</i>	4		1	A:2	120
11	C003321 Spatial Ecology [en] <i>Dries Bonte -- Department of Biology</i>	5		1	A:1	150
12	C003322 Ecosystem Dynamics [en] <i>Elie Verleyen -- Department of Biology</i>	5		1	A:1	150
13	C003323 Ecosystem Functioning [en] <i>Tom Moens -- Department of Biology</i>	5		1	A:1	150
14	C003324 Behavioural Ecology [en] <i>Lucy Mitchell -- Department of Biology</i>	4		1	A:2	120

15	C003325	Ecological Modelling [en] <i>Dries Bonte -- Department of Biology</i>	7	1	A:2	210
16	C003326	Conservation Genetics [en] <i>Philippe Helsen -- Department of Biology</i>	5	2	A:2 ^a	150
17	C003327	Ecosystem Management and Services [en] <i>Sander Jacobs -- Department of Biology</i>	7	2	A:J	210
18	C003328	Plant Developmental Biology [en] <i>Tom Beeckman -- Department of Plant Biotechnology and Bioinformatics</i>	5	1	A:2	150
19	C003347	Biology of Ageing [en] <i>Bart Braeckman -- Department of Biology</i>	4	1	(A:2) ^d	120
20	C003329	Physiological Regulation in Plants [en] <i>Dominique Van Der Straeten -- Department of Biology</i>	5	1	A:1	150
21	C003352	Physiological Regulation in Animals [en] <i>Bart Braeckman -- Department of Biology</i>	5	1	A:2	135
22	C003330	Functional Biotic Interactions [en] <i>Michiel Vandecasteele -- Department of Plant Biotechnology and Bioinformatics</i>	6	1	A:2	180
23	C003331	Functional Abiotic Interactions [en] <i>Anne Willems -- Department of Biochemistry, Physiology and Microbiology</i>	6	1	A:1	180
24	C003332	Model Organisms [en]	3	1	A:2	90
25	C002865	Bioethics [en] <i>Michiel De Proost -- Department of Philosophy and Moral Sciences</i>	3	1	A:1	80

1.3 Elective Courses

12 credits

Subscribe to 12 credit units from 1 modules from the following list. Subject to approval by the faculty.

1.3.1 Educational Module

12 credits

Subscribe to 12 credit units from the following list, with

- 5 credit units from the courses with reference a,
- 3 credit units from the courses with reference b.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C003182 Molecular Genetics II <i>Geert De Jaeger -- Department of Plant Biotechnology and Bioinformatics</i>	4			A:1	115
2	C003183 Developmental Biology <i>Adelbert De Clercq -- Department of Biology</i>	5	a		A:1	125
3	C002782 Phycology and Protistology [en] <i>Koen Sabbe -- Department of Biology</i>	5	a		A:1	136
4	C003223 Terrestrial Ecology <i>Sander Jacobs -- Department of Biology</i>	3	b		A:2	90
5	C003224 Aquatic Ecology [en] <i>Wim Vyverman -- Department of Biology</i>	3	b		A:2	90

1.3.2 Research Module

12 credits

Subscribe to 12 credit units from no less than 1 and no more than 2 modules from the following list. Subject to approval by the faculty.

1.3.2.1 Elective Courses Research

Subscribe to no more than 12 credit units from the following list.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C004098 Professional Internship I [en, nl] <i>Luc Lens -- Department of Biology</i>	5		2	A:J	150
2	C004099 Professional Internship II <i>Luc Lens -- Department of Biology</i>	10		2	A:J	300
3	C004100 International Project [en] <i>Marleen De Troch -- Department of Biology</i>	5			A:J	150
4	C002755 Biological Excursions in the Human Brain [en] <i>Robrecht Raedt -- Department of Head and Skin</i>	5			A:2 ^a	135
5	C004082 Evolution of Primates and Paleo-anthropology [en] <i>Dominique Adriaens -- Department of Biology</i>	3			(A:2) ^d	75
6	C002769 Immunology and Pathology [en] <i>Martin Guillems -- Department of Molecular Biology</i>	5			(A:2) ^d	135
7	C002770 Insect Physiology <i>Dirk de Graaf -- Department of Biochemistry, Physiology and Microbiology</i>	5			(A:1) ^d	135

8	C002387	International Course [en] <i>Ann Vanreusel -- Department of Biology</i>	5	A:J	150
9	C004466	Limnology [en] <i>Dirk Verschuren -- Department of Biology</i>	4	A:2	120
10	C003874	Marine Ecology [en] <i>Carl Van Colen -- Department of Biology</i>	6	A:1	150
11	C002774	Microbial Ecology [en] <i>Anne Willems -- Department of Biochemistry, Physiology and Microbiology</i>	5	(A:1) ^d	140
12	C002775	Molecular Plant Physiology	5		135
13	C004412	Introduction to Multivariate Data Analysis	3		90
14	C002777	Mycology: Basidiomycota [en] <i>Annemieke Verbeken -- Department of Biology</i>	5	A:1	135
15	C002778	Ornithology [en] <i>Luc Lens -- Department of Biology</i>	5	(A:2) ^d	135
16	C004386	Phylogenetics and Evolution of Flowering Plants [en] <i>Lars Chatrou -- Department of Biology</i>	5	A:2 ^a	145
17	C001045	Teledetection: Image Registration and Processing <i>Tim Van de Voorde -- Department of Geography</i>	5	A:2	150
18	E084760	Geographic Information Systems (partim) <i>Nico Van de Weghe -- Department of Geography</i>	3	A:1	90
19	C004081	Biodiversity of Aquatic Food Webs: from Algae to Marine Mammals [en] <i>Marleen De Troch -- Department of Biology</i>	3	A:1	90
20	C004385	Laboratory Animal Science [en] <i>Katleen Hermans -- Department of Pathobiology, Pharmacology and Zoological Medicine</i>	9	A:J	270
21	C003306	Advanced Cell Biology [en] <i>Geert van Loo -- Department of Molecular Biology</i>	5	A:1 ^a	150
22	C003307	Functional Diversity of Prokaryotes [en] <i>Anne Willems -- Department of Biochemistry, Physiology and Microbiology</i>	4	A:1 ^a	120
23	I002457	Vegetation Science <i>Lander Baeten -- Department of Environment</i>	3	A:1	90
24	I002691	Nature Conservation	4		120
25	C004009	History and Philosophy of Sciences <i>Maarten Van Dyck -- Department of Philosophy and Moral Sciences</i>	3	B:2	90
26	C004083	History and Philosophy of Biology [en] <i>Gertrudis Van de Vijver -- Department of Philosophy and Moral Sciences</i>	3	A:2	90
27	C004102	Practical Skills in Academic Biological Education <i>Dominique Adriaens -- Department of Biology</i>	3	A:J	90
28	C004103	Introduction to Biomimicry [en] <i>Liliana D'Alba Altamirano -- Department of Biology</i>	3	A:1	90
29	C004411	Writing Academic Papers [en] <i>Danny Haelewaters -- Department of Biology</i>	4	A:1	120
30	A005569	Global Minds [en] <i>Ines Keygnaert -- Department of Public Health and Primary Care</i>	5	UKV	A:2 150

1.3.2.2 Elective Courses UGent and other Universities

Subscribe to courses for no more than 12 credit units to be chosen from study programmes of UGent including the minor Bio-inspired Innovation and Sustainability, the major General Biology, the [Ghent University elective courses](#) or from study programmes of other universities of the Flemish Community or (online) courses from [Erasmus+ partner universities](#).

2 Teaching Component 36 credits

For courses without indication of the standard learning path, the student can choose whether to take the course in the first or second year, depending on the rest of his/her curriculum. Students must complete the corresponding teaching methodology course before entering into an internship, or at least take the teaching methodology course simultaneously.

2.1 Programme Pathway Theoretical Education 12 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	H002197 The Teacher within School and Society <i>Melissa Tuytens -- Department of Educational Studies</i>	4			A:1	120

2	H002196	Classroom Management and Reflection <i>Tijs Rotsaert -- Department of Educational Studies</i>	4		A:2	120
3	H002198	Psychology of Adolescence <i>Wim Beyers -- Department of Developmental, Personality and Social Psychology</i>	4		A:1	120

2.2 Programme Pathway Teaching Methodology 6 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	H002220 Teaching Methodology: Biology <i>Dominique Adriaens -- Department of Biology</i>	6			A:J	180

2.3 Programme Pathway Internship 12 credits

Subscribe to 12 credit units from the following list, with

- 4 credit units from the courses with reference a, if no additional Teaching Methodology Course is taken in Module 2 of the Elective Courses
- 4 credit units from the courses with reference b, if an additional Teaching Methodology Course is taken in Module 2 of the Elective Courses

Nr	Course	CRDT	Ref	MT1	Session	Study
1	H002299 Internship A: STEM <i>Katrien Strubbe -- Department of Chemistry</i>	4			A:J	100
2	H002315 Internship B: Biology <i>Dominique Adriaens -- Department of Biology</i>	4			A:J	100
3	H002331 Internship C: Biology <i>Dominique Adriaens -- Department of Biology</i>	4	a		A:J	100
4	H002330 Internship C: Chemistry <i>Katrien Strubbe -- Department of Chemistry</i>	4	b		A:J	100

2.4 Elective Courses 6 credits

Subscribe to 6 credit units from one or different modules from the following list. Subject to approval by the faculty.

2.4.1 Module 1: List of Elective Courses

The courses with reference b can only be chosen if the course with reference a has been passed.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	H001608 Movement and Sports: Now and Later <i>Veerle Segers -- Department of Movement and Sports Sciences</i>	4	UKV		A:2	120
2	H001838 Culture, Media and Education <i>Kris Rutten -- Department of Educational Studies</i>	4			A:2	120
3	H002128 Methods to Facilitate Socratic Group Discussions in the Educational Context <i>Veerle Provoost -- Department of Philosophy and Moral Sciences</i>	4			A:2	120
4	H002213 Motivational Psychology <i>Sofie Morbée -- Department of Developmental, Personality and Social Psychology</i>	5			A:1	150
5	H002344 Linguistic Proficiency in Content and Language Integrated Learning: Dutch <i>Bart Deygers -- Department of Translation, Interpreting and Communication</i>	3	b	2	A:2	90
6	H002247 Linguistic Proficiency in Content and Language Integrated Learning: English [en] <i>June Eyckmans -- Department of Translation, Interpreting and Communication</i>	3	b	2	A:2	90
7	H002248 Linguistic Proficiency in Content and Language Integrated Learning: French [fr] <i>Pascale Hadermann -- Department of Linguistics</i>	3	b	2	A:2	90
8	H002249 Linguistic Proficiency in Content and Language Integrated Learning: German [de] <i>Gunther Martens -- Department of Literary Studies</i>	3	b	2	A:2	90
9	H002246 Theory and Practice of Content and Language Integrated Learning <i>Ulrike Vogl -- Department of Linguistics</i>	3	a	1	A:1	90
10	H002283 Teaching Methodology: General Subjects for Technical and Vocational Education, including Internship	6			A:2	160

2.4.2 Module 2: Additional Course Teaching Methodology

Taking an additional Teaching Methodology Course implies taking the corresponding Internship in the Programme Pathway Internship. Students who are able to demonstrate that they have acquired at least 30 academic credits in another specific domain (60 credits if it concerns a language), can submit a request to the Curriculum Manager for the Master of Education to take the corresponding teaching methodology course. If the Curriculum Manager agrees, the Programme Pathway Internship needs to be revised allowing a student to follow an "Internship C" in this additional teaching methodology.

Nr	Course	CRDT	Ref	MT1	Session	Study
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1	H002219	Teaching Methodology: Chemistry	6		A:J	180
		<i>Katrien Strubbe -- Department of Chemistry</i>				

2.4.3 Module 3: Additional Internship

Nr	Course	CRDT	Ref	MT1	Session	Study
1	H002332 Short Additional Internship <i>Katrien Strubbe -- Department of Chemistry</i>	3			A:J	80
2	H002333 Extended Additional Internship <i>Katrien Strubbe -- Department of Chemistry</i>	6			A:J	160

2.4.4 Module 4: an Elective Course related to Education

Subscribe to a course of no less than 6 credit units, related to education, and lectured at a university belonging to the Flemish Community (see also: [Enlight Elective Courses](#)), subject to approval by the faculty.

3 Master's Dissertation 30 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C004104 Master's Dissertation	30		2	A:J	840

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