GHENT UNIVERSITY

Study Programme

Academic year 2025-2026

Faculty of Sciences

Master of Science in Biology

Language of instruction: English

Programme version 10

1 General Courses — 20 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	C004525	Integrated Research Project *Kenny Bogaert -- Department of Biology*	8		1	A:J	210
2	C003302	Academic Grant Writing *Matthew Shawkey -- Department of Biology*	3		1	A:2	90
3	C004563	Scientific Communication *Danny Haelewaters -- Department of Biology*	4		2	A:1	120
4	C003345	Advanced Biostatistics *Carl Vangestel -- Department of Biology*	5		2	A:1	150

2 Majors — 40 credits

Subscribe to 40 credit units from 1 major from the following list. Subject to approval by the faculty.
Full-time standard learning track: Students can choose which of the Major and Elective course units will be taken in the first respectively the second year of study; a total of 49 credits is taken in the first and a total of 21 credits in the second year of study. Courses for which MT1 mentions '1' must be followed in the first master's year.
Please note: some elective courses are offered only every two years or require specific initial competences. Keep this in mind when choosing your Major and Elective courses.

2.1 Major Biodiversity and Evolutionary Biology — 40 credits

2.1.1 Core Courses

Subscribe to no less than 24 credit units from the following list.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	C003310	Taxonomy and Systematics *Koen Sabbe -- Department of Biology*	4		1	A:1	120
2	C003311	Phylogenetics *Olivier De Clerck -- Department of Biology*	4		1	A:1	120
3	C004527	Spatial Processes and Patterns in Biodiversity *Dries Bonte -- Department of Biology*	4		1	A:1	120
4	C003314	Paleobiology *Thijs Vandenbroucke -- Department of Geology*	5		1	A:1	150
5	C003315	Biodiversity Conservation *Ana Rita Giraldes Simoes -- Department of Biology*	4		1	A:2	120
6	C004274	Evolutionary Morphology *Lars Chatrou -- Department of Biology*	5		1	A:1	150
7	C004526	Evolutionary Genomics *Frederik Hendrickx*	6		1	A:1	180

2.1.2 In-depth Courses

Subscribe to no more than 16 credit units from the following list.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	C004580	Advanced Mycology *Annemieke Verbeken -- Department of Biology*	5			A:1	150
2	C004581	Ornithology *Luc Lens -- Department of Biology*	4			(A:2)[d]	120

3	C004386	Phylogenetics and Evolution of Flowering Plants *Lars Chatrou -- Department of Biology*	5		A:2[a]	145
4	C004082	Evolution of Primates and Paleo-anthropology *Dominique Adriaens -- Department of Biology*	3		(A:2)[d]	75
5	C003307	Functional Diversity of Prokaryotes *Anne Willems -- Department of Biochemistry, Physiology and Microbiology*	4		A:1[a]	120
6	C004602	Multivariate Analysis of Biological Data *Koen Sabbe -- Department of Biology*	3		A:2[a]	90

2.2 Major Global Change Ecology 40 credits

2.2.1 Core Courses

Subscribe to no less than 24 credit units from the following list.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	C003320	Climate Change *Dirk Verschuren -- Department of Biology*	4		1	A:2	120
2	C004527	Spatial Processes and Patterns in Biodiversity *Dries Bonte -- Department of Biology*	4		1	A:1	120
3	C003322	Ecosystem Dynamics *Elie Verleyen -- Department of Biology*	5		1	A:1	150
4	C003324	Behavioural Ecology *Lucy Mitchell -- Department of Biology*	4		1	A:2	120
5	C004528	Ecological Modelling *Dries Bonte -- Department of Biology*	4		1	A:1	120
6	C004564	Human and Political Ecology: Global Perspective *Sander Jacobs*	4		1	A:1	120
7	C004529	Ecophysiology *Nicky Wybouw -- Department of Biology*	4		1	A:1	120

2.2.2 In-depth Courses

Subscribe to no more than 16 credit units from the following list.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	C004530	Individual Based Modelling *Dries Bonte -- Department of Biology*	4			(A:2)[d]	120
2	C003326	Conservation Genetics *Philippe Helsen -- Department of Biology*	5			A:2[a]	150
3	C004602	Multivariate Analysis of Biological Data *Koen Sabbe -- Department of Biology*	3			A:2[a]	90
4	C004466	Limnology *Dirk Verschuren -- Department of Biology*	4			A:2	120
5	C003874	Marine Ecology *Carl Van Colen -- Department of Biology*	6			A:1	150
6	C004582	Microbial Ecology *Anne Willems -- Department of Biochemistry, Physiology and Microbiology*	4			(A:1)[d]	120
7	C004531	Soil Ecology *Elie Verleyen -- Department of Biology*	4			A:2[a]	120

2.3 Major Functional Biology 40 credits

2.3.1 Core Courses

Subscribe to no less than 24 credit units from the following list.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	C003329	Physiological Regulation in Plants *Sébastjen Schoenaers -- Department of Biology*	5		1	A:1	150
2	C003352	Physiological Regulation in Animals *Bart Braeckman -- Department of Biology*	5		1	A:2	135
3	C004532	Functional Abiotic Interactions: Animals *Bart Braeckman -- Department of Biology*	3		1	A:1	90
4	C004533	Functional Abiotic Interactions: Plants *Sébastjen Schoenaers -- Department of Biology*	3		1	A:1	90

5	C004534	Functional Abiotic Interactions: Microbes *Anne Willems -- Department of Biochemistry, Physiology and Microbiology*	3		1	A:1	90
6	C002714	Host-Parasite Interactions *Dirk de Graaf -- Department of Biochemistry, Physiology and Microbiology*	3		1	A:1	80
7	C003097	Plant Biotic Interactions *Sofie Goormachtig -- Department of Plant Biotechnology and Bioinformatics*	3		1	A:2	80
8	C003328	Plant Developmental Biology *Tom Beeckman -- Department of Plant Biotechnology and Bioinformatics*	5		1	A:2	150
9	C003333	Evolutionary Developmental Biology of Animals *Paul Witten -- Department of Biology*	5		1	A:2	140
10	C004535	Plant Evolutionary Developmental Biology *Tom Beeckman -- Department of Plant Biotechnology and Bioinformatics*	3		1	A:2	90
11	C004529	Ecophysiology *Nicky Wybouw -- Department of Biology*	4		1	A:1	120

2.3.2 In-depth Courses

Subscribe to no more than 16 credit units from the following list.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	C003347	Biology of Ageing *Bart Braeckman -- Department of Biology*	4			(A:2)[d]	120
2	C002755	Biological Excursions in the Human Brain *Robrecht Raedt -- Department of Head and Skin*	5			A:2[a]	135
3	C002770	Insect Physiology [nl] *Dirk de Graaf -- Department of Biochemistry, Physiology and Microbiology*	5			(A:1)[d]	135
4	C002775	Molecular Plant Physiology *Thomas Depaepe -- Department of Biology*	5			A:1[a]	135
5	C003306	Advanced Cell Biology *Geert van Loo -- Department of Molecular Biology*	5			A:1[a]	150
6	C002769	Immunology and Pathology *Martin Guilliams -- Department of Molecular Biology*	5			(A:2)[d]	135
7	C002713	Glycobiology *Nico Callewaert -- Department of Biochemistry, Physiology and Microbiology*	3			A:1	80
8	C004385	Laboratory Animal Science *Katleen Hermans -- Department of Pathobiology, Pharmacology and Zoological Medicine*	9			A:J	270
9	C002865	Bioethics *Michiel De Proost -- Department of Philosophy and Moral Sciences*	3			A:1	80
10	C003104	Plant Research Technologies *Hilde Nelissen -- Department of Plant Biotechnology and Bioinformatics*	3			A:1	75
11	C003102	The Plant Factory *Frank Van Breusegem -- Department of Plant Biotechnology and Bioinformatics*	3			A:1	80
12	C002708	Experimental Molecular Cell Biology *Rudi Beyaert -- Department of Molecular Biology*	3			A:2	80
13	C003616	Systems Biology *Bert De Rybel -- Department of Plant Biotechnology and Bioinformatics*	4			A:2	120
14	H002440	Animal Cognition *Frederick Verbruggen -- Department of Experimental Psychology*	4			A:1	120

3 Elective Courses 30 credits

Subscribe to 30 credit units from no less than 1 and no more than 5 modules from the following list.
To subscribe for courses from the 3 majors, use module 3.5

3.1 Focus Bio-inspired Innovation and Sustainability

Subscribe to no less than 12 and no more than 30 credit units from the following list, with 12 credit units with reference a.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	C004101	Bio-inspired Project *Matthew Shawkey -- Department of Biology*	9	a		A:J	270
2	C004103	Introduction to Biomimicry *Liliana D'Alba Altamirano -- Department of Biology*	3	a		A:1	90
3	F001021	Basic Entrepreneurship [nl] *Yannick Dillen -- Department of Marketing, Innovation and Organisation*	3	UKV		A:1	90

Nr							
4	F001022	Dare to Venture *Johan Verrue -- Department of Marketing, Innovation and Organisation*	4			A:2	120
5	F000752	Environmental Economics and Policy [nl] *Brent Bleys -- Department of Economics*	6			A:2	180
6	A005569	Global Minds *Ines Keygnaert -- Department of Public Health and Primary Care*	5	UKV		A:2	150

3.2 Focus Marine Biology

Subscribe to no more than 18 credit units from the following list.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	C003873	Oceanography *Ann Vanreusel -- Department of Biology*	6			A:1	150
2	C004491	Aquatic Food Web Ecology *Marleen De Troch -- Department of Biology*	3			B:1	90
3	C003870	Marine Policy and Governance *Klaas Willaert -- Department of European, Public and International Law*	3			A:1	75
4	C004490	Aquatic Genomics [en, nl] *Olivier De Clerck -- Department of Biology*	6			A:1	180

3.3 Focus Professional Skills

Subscribe to no more than 31 credit units from the following list.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	C004098	Professional Internship I [en, nl] *Luc Lens -- Department of Biology*	5			A:J	150
2	C004099	Professional Internship II [nl] *Luc Lens -- Department of Biology*	10			A:J	300
3	C004100	International Project *Marleen De Troch -- Department of Biology*	5			A:J	150
4	C002387	International Course *Ann Vanreusel -- Department of Biology*	5			A:J	150
5	C004009	History and Philosophy of Sciences [nl] *Maarten Van Dyck -- Department of Philosophy and Moral Sciences*	3			B:2	90
6	C004083	History and Philosophy of Biology *Gertrudis Van de Vijver -- Department of Philosophy and Moral Sciences*	3			A:2	90
7	C004102	Practical Skills in Academic Biological Education [nl] *Dominique Adriaens -- Department of Biology*	3			A:J	90

3.4 Focus Education

Subscribe to no more than 30 credit units from the abridged MSc in Teaching in Science and Technology (Biology).

3.5 Elective Courses UGent and other Universities

Subscribe to courses for no more than 30 credit units to be chosen from the majors, the study programmes of UGent including the Ghent University elective courses or from study programmes of other universities of the Flemish Community or (online) courses from Erasmus+ partner universities.
Subscribe to: no less than 20 credit units 'Biology related courses'.

4 Master's Dissertation 30 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	C002312	Master's Dissertation	30		2		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 cours name, using the following ISO codes:

bg: Bulgarian	de: German	es: Spanish	ja: Japanese	pl: Polish	sh: Kroatian/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 in 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