

Faculty of Bioscience Engineering

Bachelor of Science in Bioscience Engineering

Language of instruction: Dutch

Programme version 1

## 1 General Courses 150 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002907 Analysis: functions of one variable Jan Baetens -- Department of Data Analysis and Mathematical Modelling	5		1	A:1	150
2	I002417 Mechanics, Vibrations and Waves Dirk Poelman -- Department of Solid State Sciences	5		1	A:1	150
3	I002418 General and Inorganic Chemistry: Structure Rik Van Deun -- Department of Chemistry	5		1	A:1	150
4	I002419 Cellular and Molecular Biology Tina Kyndt -- Department of Biotechnology	4		1	A:1	120
5	I002420 Applied Botany: Morphology and Diversity Pieter De Frenne -- Department of Environment	5		1	A:1	150
6	I002908 Scientific Computing Jan Verwaeren -- Department of Data Analysis and Mathematical Modelling	4		1	A:1	120
7	I002909 Linear Algebra Willem Waegeman -- Department of Data Analysis and Mathematical Modelling	4		1	A:2	120
8	I002910 Analysis: functions of several variables Jan Baetens -- Department of Data Analysis and Mathematical Modelling	4		1	A:2	120
9	I002423 Thermodynamic Processes Frederik Ronsse -- Department of Green Chemistry and Technology	5		1	A:2	150
10	I002424 General and Inorganic Chemistry: Reactivity and Analysis Rik Van Deun -- Department of Chemistry	6		1	A:2	180
11	I002425 Applied Zoology: Invertebrates Luc Tirry -- Department of Plants and Crops	5		1	A:2	150
12	I002911 Earth Sciences David Van Rooij -- Department of Geology	4		1	A:2	120
13	I002427 Ecology Kathy Steppe -- Department of Plants and Crops	4		1	A:2	120
14	I002428 Differential Equations Michiel Stock -- Department of Data Analysis and Mathematical Modelling	5		2	A:1	150
15	I002429 Electricity, Magnetism and Sensors Toon Verstraelen -- Department of Physics and Astronomy	5		2	A:1	150
16	I002430 Applied Zoology: Vertebrates Luc Tirry -- Department of Plants and Crops	4		2	A:1	120
17	I002431 Applied Botany: Physiology Kathy Steppe -- Department of Plants and Crops	5		2	A:1	150
18	I002432 Organic Chemistry: Structure Matthias D'hooghe -- Department of Green Chemistry and Technology	3		2	A:1	90
19	I002433 Biochemistry Els Van Damme -- Department of Biotechnology	4		2	A:1	120
20	I002912 Sustainable Development in Production and Consumption Systems Joost Dessein -- Department of Agricultural Economics	4		2	A:2	120
21	I002435 Probabilistic Models Bernard De Baets -- Department of Data Analysis and Mathematical Modelling	5		2	A:2	150

22	I002436	Microbiology Wim Soetaert -- Department of Biotechnology	5	2	A:2	150
23	I002437	Organic Chemistry: Reactivity Matthias D'hooghe -- Department of Green Chemistry and Technology	7	2	A:2	210
24	I002913	Fluid Mechanics Niko Verhoest -- Department of Environment	4	2	A:2	120
25	I002439	Environmental Sciences Philippe De Smedt -- Department of Environment	4	2	A:1	120
26	I002440	Data Science Jan Verwaeren -- Department of Data Analysis and Mathematical Modelling	5	2	A:2	150
27	I002441	Statistical Data Processing Stijn Luca -- Department of Data Analysis and Mathematical Modelling	4	3	A:1	120
28	I002442	Process Engineering [en] Jo Dewulf -- Department of Green Chemistry and Technology	4	3	A:2	120
29	I002443	Heat and Mass Transport Jan Pieters -- Department of Plants and Crops	4	3	A:1	120
30	I002444	Chemical Analytical Techniques Kristof Demeestere -- Department of Green Chemistry and Technology	4	3	A:2	120
31	I002445	Modelling and Simulation of Biosystems Michiel Stock -- Department of Data Analysis and Mathematical Modelling	4	3	A:2	120
32	I002446	Economics Wim Verbeke -- Department of Agricultural Economics	4	3	A:1	120
33	I002447	Bachelor Thesis Niko Verhoest -- Department of Environment	6	3	A:J	180

## 2 Majors

30 credits

Subscribe to 1 major from the following list.

### 2.1 Major Forest and Nature Management

30 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002455 Soil Properties and Soil Processes Stefaan De Neve -- Department of Environment	5		3	A:1	150
2	I002450 Remote Sensing Fieke Vancoillie -- Department of Environment	5		3	A:1	150
3	I002457 Vegetation Science Lander Baeten -- Department of Environment	3		3	A:1	90
4	I002458 Basics of Forest and Wood Science Kris Verheyen -- Department of Environment	6		3	A:J	180
5	I002751 Principles of Quantitative Water Management Niko Verhoest -- Department of Environment	3		3	A:2	90
6	I002414 Geographic Information Systems: Basics and Applications Fieke Vancoillie -- Department of Environment	5		3	A:2	150
7	I002461 Integrated Practicum Forest and Nature Kris Verheyen -- Department of Environment	3		3	A:2	90

### 2.2 Major Cell and Gene Biotechnology

30 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002511 Biocatalysis and Enzyme Technology Tom Desmet -- Department of Biotechnology	5		3	A:1	150
2	I002521 Cell Biology Laurens Pauwels -- Department of Biotechnology	5		3	A:1	150
3	I002522 Gene Technology and Molecular Diagnostics [en] Tina Kyndt -- Department of Biotechnology	6		3	A:1	180
4	I002505 Microbial Ecological Processes Nico Boon -- Department of Biotechnology	4		3	A:1	120
5	I002518 Applied Genetics Thomas Van Leeuwen -- Department of Plants and Crops	5		3	A:2	150
6	I002523 Molecular Biology of Plant, Animal and Human Associated Bacteria [en]	5		3	A:2	150

**2.3 Major Chemistry and Food Technology****30 credits**

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002509 Food Microbiology and Food Preservation Frank Devlieghere -- Department of Food Technology, Safety and Health	5		3	A:1	150
2	I002511 Biocatalysis and Enzyme Technology Tom Desmet -- Department of Biotechnology	5		3	A:1	150
3	I002512 Chemistry and Technology of Polymers Christian Stevens -- Department of Green Chemistry and Technology	5		3	A:1	150
4	I002513 Food Chemistry Bruno De Meulenaer -- Department of Food Technology, Safety and Health	5		3	A:2	150
5	I002510 Reaction Kinetics and Reactor Design Paul Van der Meeren -- Department of Green Chemistry and Technology	5		3	A:2	150
6	I002508 Environmental Technology: Water [en] Jo De Vrieze -- Department of Biotechnology	5		3	B:2	150

**2.4 Major Agricultural Sciences****30 credits**

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002455 Soil Properties and Soil Processes Stefaan De Neve -- Department of Environment	5		3	A:1	150
2	I002515 Crop Husbandry Steven Maenhout -- Department of Plants and Crops	5		3	A:1	150
3	I002516 Crop Protection Patrick De Clercq -- Department of Plants and Crops	5		3	A:1	150
4	I002519 Farm Management Joachim Schouteten -- Department of Agricultural Economics	5		3	A:2	150
5	I002517 Animal Production Systems Stefaan De Smet -- Department of Animal Sciences and Aquatic Ecology	5		3	A:2	150
6	I002518 Applied Genetics Thomas Van Leeuwen -- Department of Plants and Crops	5		3	A:2	150

**2.5 Major Land, Water and Climate****30 credits**

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002448 Soil Science Stefaan De Neve -- Department of Environment	5		3	A:1	150
2	I002449 Hydrological Processes and Hydrometry Niko Verhoest -- Department of Environment	3		3	A:1	90
3	I002450 Remote Sensing Frieke Vancoillie -- Department of Environment	5		3	A:1	150
4	I002451 Land-Atmosphere Interactions [en] Diego Miralles -- Department of Environment	4		3	A:1	120
5	I002452 Geographic Information Systems: Basics Frieke Vancoillie -- Department of Environment	3		3	A:2	90
6	I002453 Biogeochemical Cycles Steven Sleutel -- Department of Environment	5		3	A:2	150
7	I002454 Geostatistics [en] Ellen Van De Vijver -- Department of Environment	5		3	A:2	150

**2.6 Major Environmental Technology****30 credits**

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002503 Environmental Chemistry Filip Tack -- Department of Green Chemistry and Technology	6		3	A:1	180
2	I002504 Applied Freshwater Ecology [en] Peter Goethals -- Department of Animal Sciences and Aquatic Ecology	3		3	A:1	90
3	I002505 Microbial Ecological Processes Nico Boon -- Department of Biotechnology	4		3	A:1	120
4	I002701 Clean Technology: Theory and Concepts [en] Sophie Huysveld -- Department of Green Chemistry and Technology	3		3	A:1	90

5	I002507	Environmental Technology: Solid Waste Streams Frederik Ronsse -- Department of Green Chemistry and Technology	4	3	A:2	120
6	I002508	Environmental Technology: Water [en] Jo De Vrieze -- Department of Biotechnology	6	3	A:2	180
7	E039060	Sustainable Energy and Rational Use of Energy [en] Jeroen Beeckman -- Department of Electronics and Information Systems	4	3	A:2	120

#### 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