

# Study Programme

Academic year 2022-2023

# Global Campus South Korea, Faculty of Sciences, Faculty of Bioscience Engineering

# Bachelor of Science in Molecular Biotechnology

Campus: Incheon

Language of instruction: English

# Programme version 8

1	General	Courses			120	credits
Nr	Course		CRDT	Ref MT1	Session	Study
1		English for Academic Studies 1  Jonathan Ozelton Department of Environmental Technology, Food Technology and Molecular Bio	5 otechnology	1	A:1	150
2	O000133	General Biology Hoo Sun Chung Department of Environmental Technology, Food Technology and Molecular Biotec	5 chnology	1	A:1	150
3	O000078	Inorganic Chemistry 1: Structure of Matter Philippe Heynderickx Department of Environmental Technology, Food Technology and Molecular	5 Biotechnology	1	A:1	150
4	O000185	Introduction to Engineering Mathematics  **Joris Vankerschaver Department of Environmental Technology, Food Technology and Molecular B.**	5 Biotechnology	1	A:1	150
5	O000187	Physics 1: Mechanics, Motion, Energy and Momentum Soebiakto Loekman Department of Environmental Technology, Food Technology and Molecular B	5 Biotechnology	1	A:1	150
6	O000131	English for Academic Studies 2  Michael Dunne Department of Environmental Technology, Food Technology and Molecular Biotec	5 chnology	1	B:1, A:2	150
7	O000087	Inorganic Chemistry 2: Reactivity of Matter Philippe Heynderickx Department of Environmental Technology, Food Technology and Molecular	5 Biotechnology	1	A:2	150
8	O000155	Introduction to Biochemistry: Biomolecules  Mahta Mirzaei Department of Environmental Technology, Food Technology and Molecular Biotec	5 hnology	1	A:2	150
9	O000186	Mathematics 1: One-variable calculus and algebra Shodhan Rao Department of Environmental Technology, Food Technology and Molecular Biotech	5 nnology	1	A:2	150
10	O000188	Physics 2: Vibration, Waves and Thermodynamics Soebiakto Loekman Department of Environmental Technology, Food Technology and Molecular B	5 Biotechnology	1	A:2	150
11	O000096	Informatics Wesley De Neve Department of Environmental Technology, Food Technology and Molecular Biote	10 echnology	1	A:J	300
12	O000082	Organic Chemistry 1: Structure and Reactivity  Di Wu Department of Environmental Technology, Food Technology and Molecular Biotechnology	5	2	A:1	150
13	O000136	Chemical Analytical Methods  Jihae Park Department of Environmental Technology, Food Technology and Molecular Biotechno	4 logy	2	A:1	120
14	O000137	Plant Biology Stephen Depuydt Department of Plant Biotechnology and Bioinformatics	3	2	A:1	90
15	O000138	Animal Biology Magdalena Radwanska Department of Environmental Technology, Food Technology and Molecul	3 ar Biotechnology	2	A:1	75
16	O000156	Biochemistry: Metabolism Stefan Magez Department of Environmental Technology, Food Technology and Molecular Biotech	4 hnology	2	A:1	120
17	O000083	Mathematics 2: Multivariable Calculus and Geometry  Shodhan Rao Department of Environmental Technology, Food Technology and Molecular Biotech	5	2	A:1	150
18	O000091	Physics 3: Electricity and Magnetism Serge Zhuiykov Department of Environmental Technology, Food Technology and Molecular Biote.	5	2	A:1	150
19	O000157	Microbiology  Magdalena Radwanska Department of Environmental Technology, Food Technology and Molecul	4	2	A:2	120
20	O000092	Organic Chemistry 2: Advanced Reactivity  Di Wu Department of Environmental Technology, Food Technology and Molecular Biotechnology	5	2	A:2	150

21 00	00094	Physics 4: Optics and Physical and Chemical Thermodynamics Serge Zhuiykov Department of Environmental Technology, Food Technology and Molecular Biotech	5 anology	2	A:2	150
22 O0	88000	Mathematics 3: Differential Equations Shodhan Rao Department of Environmental Technology, Food Technology and Molecular Biotechnology.	5 ology	2	A:2	150
23 00	00161	Environmental Chemistry and Technology: Concepts and Methods  Jihae Park Department of Environmental Technology, Food Technology and Molecular Biotechnology	4 gy	2	A:2	120
24 00	00159	Modern Aspects of Food Sam Van Haute Department of Environmental Technology, Food Technology and Molecular Biotect	4 inology	2	A:2	120
25 O0	00160	Molecular Biology: Concepts and Methods  Magdalena Radwanska Department of Environmental Technology, Food Technology and Molecular	4 r Biotechnology	2	A:2	120

2	General	Courses			110	credits
۷r	Course		CRDT	Ref MT1	Session	Study
1	O000140	Process Engineering  Philippe Heynderickx Department of Environmental Technology, Food Technology and Molecular Bio	5 otechnology	3	A:1	150
2	O000141	Process Modelling and Control Shodhan Rao Department of Environmental Technology, Food Technology and Molecular Biotechnol	5 logy	3	A:1	150
3	O000050	Immunology Stefan Magez Department of Environmental Technology, Food Technology and Molecular Biotechno	5 logy	3	A:1	150
1	O000178	Bioinformatics 1 Wesley De Neve Department of Environmental Technology, Food Technology and Molecular Biotech	5 nology	3	A:1	150
5	O000179	Molecular Biology: Advanced Topics in Eukaryotes  Hoo Sun Chung Department of Environmental Technology, Food Technology and Molecular Biotechnology	6 nology	3	A:1	150
6	O000189	Probability and Statistics  Joris Vankerschaver Department of Environmental Technology, Food Technology and Molecular Biology.	5 technology	3	A:1	150
7	O000162	Scientific Research Writing  Jonathan Ozelton Department of Environmental Technology, Food Technology and Molecular Biotec	5 chnology	3	B:2, A:J	150
3	O000180	Bioinformatics 2  Zhen Li Department of Plant Biotechnology and Bioinformatics	5	3	A:2	150
9	O000024	Economics and Marketing Christine Yung Hung Department of Agricultural Economics	5	3	A:2	150
10	O000190	Introduction to Statistical Modelling  Joris Vankerschaver Department of Environmental Technology, Food Technology and Molecular Bion	5 technology	3	A:2	150
11	O000181	Molecular Genetics Héloïse Bastiaanse Department of Plant Biotechnology and Bioinformatics	3	3	A:2	90
12	O000182	Plant Physiology  Jonas De Saeger Department of Plant Biotechnology and Bioinformatics	3	3	A:2	90
13	O000183	Integrated Practicum 1: Plant Genetics and Physiology  Eun Kyung Yoon Department of Environmental Technology, Food Technology and Molecular Biotech	3 nology	3	A:2	75
14	C004085	Analytical Biochemistry Els Van Damme Department of Biotechnology	5	4	A:1	150
15	C004086	Biomedical Physiology  Dirk de Graaf Department of Biochemistry, Physiology and Microbiology	5	4	A:1	150
16	1002852	Industrial Biotechnology Inge Van Bogaert Department of Biotechnology	4	4	A:1	120
17	C004396	Gene Technology  Geert Berx Department of Molecular Biology	4	4	A:1	120
18	C004397	Integrated Practicum 2: Gene Technology in Practice  Xavier Saelens Department of Biochemistry, Physiology and Microbiology	3	4	A:1	75
19	C002865		3	4	B:1	80
20	O000163	Management, Entrepreneurship and Intellectual Property  Benedikt Sas Department of Food Technology, Safety and Health	4	4	A:2	108
21	O000145	Plant Biotechnology  Godelieve Gheysen Department of Biotechnology	4	4	A:2	108
22	O000184	Medical Biotechnology  Jens Staal Department of Biochemistry, Physiology and Microbiology	3	4	A:2	90

23 O000164	Company Visits and Seminars  Michael Dunne Department of Environmental Technology, Food Technology and Molec	3 cular Biotechnology	4	A:2	90
24 O000165	Bachelor's Project Michael Dunne Department of Environmental Technology, Food Technology and Molec	12 Cular Biotechnology	4	A:J	360

## 3.1 Programme-specific Elective Courses

5 credits

10 credits

Subscribe to 5 credit units from the following list.

3 Elective Courses

Ν			CRDT R	ef MT1	Session	Study
1	C004096	Molecular Cell Biology	5	4	A:1	130
		Roosmarijn Vandenbroucke Department of Molecular Biology				
2	1002853	Research-to-Business Case Studies	5	4	A:1	125
		Erik Meers Department of Green Chemistry and Technology				

## 3.2 Personal Professional Development elective module

5 credits

Subscribe to 5 credit units from one of the modules from the following list. Subject to approval by the Curriculum Committee.

#### 3.2.1 Personal Professional Development

5 credits

Νı	r Course		CRDT	Ref	MT1	Session	Study
1	O000166	Personal Professional Development	5		4	A:2	135
		Michael Dunne Department of Environmental Technology, Food Technology and Molecular Biote	chnology				

#### 3.2.2 Course offer GUGC-UGent

5 credits

Subscribe to no more than 5 credit units from the following list.

The letter in the "Ref" column indicates in which programme the course can be taken as elective (E = Environmental Technology; F =

Food Technology; M = Molecular Biotechnology; ALL = all programmes).

Nr	Course	,,,	CRDT	Ref	MT1	Session	Study
1	O000168	Experimental Food Biochemistry  Mahta Mirzaei Department of Environmental Technology, Food Technology and Molecular Biote	5 chnology	E,M	4	A:2	150
2	O000152	Food Microbiology and Preservation Sam Van Haute Department of Environmental Technology, Food Technology and Molecular Biote	5 echnology	E,M	4	A:2	150
3	O000180	Bioinformatics 2 Zhen Li Department of Plant Biotechnology and Bioinformatics	5	E,F	4	A:2	150
4	O000167	Reflection on Sustainable Development	5	ALL	4	A:2	125
5	O000050	Immunology Stefan Magez Department of Environmental Technology, Food Technology and Molecular Biotec	5 hnology	E,F	4	A:1	150
6	O000111	Plant Physiology  Jonas De Saeger Department of Plant Biotechnology and Bioinformatics	5	E,F	4	A:2	125

## 3.2.3 Course offer Incheon Global Campus Universities

5 credits

Subscribe to 5 credit units from courses offered at the partner universities at Incheon Global Campus.

Subject to approval by the Curriculum Committee.

### 3.2.4 Course offer Korean Partner Universities

5 credits

Subscribe to 5 credit units from courses offered at Korean partner universities.

Subject to approval by the Curriculum Committee.

#### 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

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