

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

Bachelor of Science in Environmental Technology

Campus: Incheon

Language of instruction: English

Programme version 9

1 General Courses 120 credits

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|----------|-------|
| 1 | O000132 English for Academic Studies 1 <i>Jonathan Ozelton -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 1 | A:1 | 150 |
| 2 | O000133 General Biology <i>Hoo Sun Chung -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 1 | A:1 | 150 |
| 3 | O000078 Inorganic Chemistry 1: Structure of Matter <i>Philippe Heynderickx -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 1 | A:1 | 150 |
| 4 | O000185 Introduction to Engineering Mathematics <i>Joris Vankerschaver -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 1 | A:1 | 150 |
| 5 | O000187 Physics 1: Mechanics, Motion, Energy and Momentum <i>Soebiakto Loekman -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 1 | A:1 | 150 |
| 6 | O000131 English for Academic Studies 2 <i>Michael Dunne -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 1 | B:1, A:2 | 150 |
| 7 | O000087 Inorganic Chemistry 2: Reactivity of Matter <i>Philippe Heynderickx -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 1 | A:2 | 150 |
| 8 | O000155 Introduction to Biochemistry: Biomolecules <i>Mahta Mirzaei -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 1 | A:2 | 150 |
| 9 | O000186 Mathematics 1: One-variable calculus and algebra <i>Shodhan Rao -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 1 | A:2 | 150 |
| 10 | O000188 Physics 2: Vibration, Waves and Thermodynamics <i>Soebiakto Loekman -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 1 | A:2 | 150 |
| 11 | O000096 Informatics <i>Wesley De Neve -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 10 | | 1 | A:J | 300 |
| 12 | O000082 Organic Chemistry 1: Structure and Reactivity <i>Di Wu -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 2 | A:1 | 150 |
| 13 | O000136 Chemical Analytical Methods <i>Jihae Park -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 4 | | 2 | A:1 | 120 |
| 14 | O000137 Plant Biology <i>Stephen Depuydt -- Department of Plant Biotechnology and Bioinformatics</i> | 3 | | 2 | A:1 | 90 |
| 15 | O000138 Animal Biology <i>Magdalena Radwanska -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 3 | | 2 | A:1 | 75 |
| 16 | O000156 Biochemistry: Metabolism <i>Stefan Magez -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 4 | | 2 | A:1 | 120 |
| 17 | O000083 Mathematics 2: Multivariable Calculus and Geometry <i>Shodhan Rao -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 2 | A:1 | 150 |
| 18 | O000091 Physics 3: Electricity and Magnetism <i>Serge Zhuikov -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 2 | A:1 | 150 |
| 19 | O000157 Microbiology <i>Magdalena Radwanska -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 4 | | 2 | A:2 | 120 |
| 20 | O000092 Organic Chemistry 2: Advanced Reactivity <i>Di Wu -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 2 | A:2 | 150 |

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|----|---------|---|---|---|-----|-----|
| 21 | O000094 | Physics 4: Optics and Physical and Chemical Thermodynamics | 5 | 2 | A:2 | 150 |
| | | <i>Serge Zhuiykov -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | |
| 22 | O000088 | Mathematics 3: Differential Equations | 5 | 2 | A:2 | 150 |
| | | <i>Shodhan Rao -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | |
| 23 | O000161 | Environmental Chemistry and Technology: Concepts and Methods | 4 | 2 | A:2 | 120 |
| | | <i>Jihae Park -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | |
| 24 | O000159 | Modern Aspects of Food | 4 | 2 | A:2 | 120 |
| | | <i>Sam Van Haute -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | |
| 25 | O000160 | Molecular Biology: Concepts and Methods | 4 | 2 | A:2 | 120 |
| | | <i>Magdalena Radwanska -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | |

2 General Courses 106 credits

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|----------|-------|
| 1 | O000140 Process Engineering | 5 | | 3 | A:1 | 150 |
| | <i>Philippe Heynderickx -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | | |
| 2 | O000141 Process Modelling and Control | 5 | | 3 | A:1 | 150 |
| | <i>Shodhan Rao -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | | |
| 3 | O000100 Process Technology | 5 | | 3 | A:1 | 150 |
| | <i>Frederik Ronsse -- Department of Green Chemistry and Technology</i> | | | | | |
| 4 | O000170 Green Chemistry and Biotechnology | 5 | | 3 | A:1 | 150 |
| | <i>Di Wu -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | | |
| 5 | O000171 Air Treatment and Technology | 5 | | 3 | A:1 | 150 |
| | <i>Philippe Heynderickx -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | | |
| 6 | O000189 Probability and Statistics | 5 | | 3 | A:1 | 150 |
| | <i>Joris Vankerschaver -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | | |
| 7 | O000162 Scientific Research Writing | 5 | | 3 | B:2, A:J | 150 |
| | <i>Jonathan Ozeltan -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | | |
| 8 | O000024 Economics and Marketing | 5 | | 3 | A:2 | 150 |
| | <i>Christine Yung Hung -- Department of Agricultural Economics</i> | | | | | |
| 9 | O000190 Introduction to Statistical Modelling | 5 | | 3 | A:2 | 150 |
| | <i>Joris Vankerschaver -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | | |
| 10 | O000172 Waste Valorization | 5 | | 3 | A:2 | 150 |
| | <i>Erik Meers -- Department of Green Chemistry and Technology</i> | | | | | |
| 11 | O000173 Remediation of Soil and Sediment | 5 | | 3 | A:2 | 150 |
| | <i>Filip Tack -- Department of Green Chemistry and Technology</i> | | | | | |
| 12 | O000174 Water Treatment and Technology | 5 | | 3 | A:2 | 150 |
| | <i>Xiaofei Wang -- Department of Biotechnology</i> | | | | | |
| 13 | I002853 Research-to-Business Case Studies | 5 | | 4 | A:1 | 125 |
| | <i>Erik Meers -- Department of Green Chemistry and Technology</i> | | | | | |
| 14 | I002606 Environmental Risk Assessment | 5 | | 4 | A:1 | 150 |
| | <i>Karel De Schampelaere -- Department of Animal Sciences and Aquatic Ecology</i> | | | | | |
| 15 | I002535 Applied Marine Ecology | 3 | | 4 | A:1 | 90 |
| | <i>Colin Janssen -- Department of Animal Sciences and Aquatic Ecology</i> | | | | | |
| 16 | I002701 Clean Technology: Theory and Concepts | 3 | | 4 | A:1 | 90 |
| | <i>Sophie Huysveld -- Department of Green Chemistry and Technology</i> | | | | | |
| 17 | O000163 Management, Entrepreneurship and Intellectual Property | 4 | | 4 | A:2 | 108 |
| | <i>Benedikt Sas -- Department of Food Technology, Safety and Health</i> | | | | | |
| 18 | O000175 Environmental Law and Management | 5 | | 4 | A:2 | 150 |
| | <i>Stijn Speelman -- Department of Agricultural Economics</i> | | | | | |
| 19 | O000176 Modelling and Data Analysis for Environmental Applications | 3 | | 4 | A:2 | 90 |
| | <i>Philippe Heynderickx -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | | |
| 20 | O000177 Microbial Reuse Technology | 3 | | 4 | A:2 | 90 |
| | <i>Alberte Requeira López -- Department of Biotechnology</i> | | | | | |
| 21 | O000164 Company Visits and Seminars | 3 | | 4 | A:2 | 90 |
| | <i>Michael Dunne -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | | |
| 22 | O000165 Bachelor's Project | 12 | | 4 | A:J | 360 |
| | <i>Michael Dunne -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | | | | | |

3.1 Programme-specific Elective Courses

9 credits

Subscribe to 9 credit units from the following list.

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|---|------|-----|-----|---------|-------|
| 1 | I002504 Applied Freshwater Ecology <i>Peter Goethals -- Department of Animal Sciences and Aquatic Ecology</i> | 3 | | 4 | A:1 | 90 |
| 2 | I002609 Environmental Microbiology <i>Nico Boon -- Department of Biotechnology</i> | 3 | | 4 | A:1 | 90 |
| 3 | I002702 Clean Technology: Assessment Methods <i>Sophie Huysveld -- Department of Green Chemistry and Technology</i> | 3 | | 4 | A:1 | 90 |
| 4 | I002752 Advanced Wastewater Treatment Process Design <i>Eveline Volcke -- Department of Green Chemistry and Technology</i> | 3 | | 4 | A:1 | 90 |
| 5 | I002776 Processes in Practice <i>Eveline Volcke -- Department of Green Chemistry and Technology</i> | 3 | | 4 | A:1 | 90 |
| 6 | I001439 Environmental Noise <i>Timothy Van Renterghem -- Department of Information Technology</i> | 3 | | 4 | A:1 | 75 |
| 7 | I002604 Oceans and Human Health <i>Jana Asselman -- Department of Animal Sciences and Aquatic Ecology</i> | 3 | | 4 | A:1 | 90 |
| 8 | I002170 Environmental Inventory Techniques <i>Kim Calders -- Department of Environment</i> | 3 | | 4 | A:1 | 75 |

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

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1 | O000166 Personal Professional Development <i>Michael Dunne -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | | 4 | A:2 | 135 |

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 <i>Mahta Mirzaei -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | E,M | 4 | A:2 | 150 |
| 2 | O000152 Food Microbiology and Preservation <i>Sam Van Haute -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | E,M | 4 | A:2 | 150 |
| 3 | O000180 Bioinformatics 2 <i>Zhen Li -- Department of Plant Biotechnology and Bioinformatics</i> | 5 | E,F | 4 | A:2 | 150 |
| 4 | O000167 Reflection on Sustainable Development | 5 | ALL | 4 | A:2 | 125 |
| 5 | O000050 Immunology <i>Stefan Magez -- Department of Environmental Technology, Food Technology and Molecular Biotechnology</i> | 5 | E,F | 4 | A:1 | 150 |
| 6 | O000111 Plant Physiology <i>Jonas De Saeger -- Department of Plant Biotechnology and Bioinformatics</i> | 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 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 |