

Faculty of Sciences

Master of Science in Biochemistry and Biotechnology

Language of instruction: English

Programme version 8

## 1 General Courses 30 credits

| Nr | Course  | CRDT | Ref | MT1 | Session | Study |
|----|---|------|-----|-----|---------|-------|
| 1  | C003525 Structure and Function of Biological Macromolecules<br><i>Savvas Savvides -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 0</a> | 4    |     | 1   | A:1     | 120   |
| 2  | C003526 Structural Bioinformatics<br><i>Savvas Savvides -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 0</a>                           | 3    |     | 1   | A:1     | 80    |
| 3  | C000500 Bioinformatics 2<br><i>Klaas Vandepoele -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>                                      | 3    |     | 1   | A:2     | 80    |
| 4  | C003527 Biostatistics<br><i>Kathleen Marchal -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>   | 4    |     | 1   | A:1     | 120   |
| 5  | C003671 Biotechnology and Society<br><i>Marie Joossens -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 0</a>                            | 3    |     | 2   | A:J     | 80    |
| 6  | C003616 Systems Biology<br><i>Bert De Rybel -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>  | 4    |     | 1   | A:2     | 120   |
| 7  | C002381 Biotechnology: Biosafety, GMP and Intellectual Property<br><i>Koen Vanhalst -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>                       | 3    |     | 2   | A:1     | 80    |
| 8  | C002865 Bioethics<br><i>Michiel De Proost -- Department of Philosophy and Moral Sciences</i><br><a href="#">Indicative price: € 5</a>   | 3    |     | 2   | A:1     | 80    |
| 9  | C003106 Preparation of Master's Dissertation<br><i>Peter Vandenabeele -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 5</a>                                     | 3    |     | 2   | B:1     | 80    |

## 2 Majors 30 credits

Subscribe to 1 major from the following list. Subject to approval by the faculty.  
Students with minor research choose another major than the courses of the focus.

### 2.1 Major Bioinformatics and Systems Biology 30 credits

| Nr | Course  | CRDT | Ref | MT1 | Session | Study |
|----|---|------|-----|-----|---------|-------|
| 1  | C002732 Programming for Bioinformatics<br><i>Pieter De Bleser -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>                               | 6    |     | 1   | A:1     | 160   |
| 2  | C002700 Comparative Genomics<br><i>Klaas Vandepoele -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>                    | 3    |     | 1   | A:2     | 80    |
| 3  | C004456 Linux for Bioinformatics Environment<br><i>Herman De Beukelaer -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a> | 3    |     | 1   | A:2     | 80    |

|   |         |   |   |   |     |     |
|---|---------|---|---|---|-----|-----|
| 4 | C003083 | Bioinformatics Algorithms<br><i>Veerle Fack -- Department of Mathematics, Computer Science and Statistics</i><br><a href="#">Indicative price: € 0</a>                    | 3 | 1 | A:2 | 80  |
| 5 | C003084 | Project Bioinformatics and Systems Biology<br><i>Herman De Beukelaer -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a> | 6 | 1 | A:J | 170 |
| 6 | C003617 | Modelling of Biological Systems<br><i>Steven Maere -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>                   | 3 | 2 | A:1 | 80  |
| 7 | C002703 | Data Mining<br><i>Yvan Saeys -- Department of Mathematics, Computer Science and Statistics</i><br><a href="#">Indicative price: € 10</a>                                  | 3 | 2 | A:1 | 80  |
| 8 | C003085 | Databases for Bioinformatics<br><i>Pieter De Bleser -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>                                       | 3 | 2 |     | 80  |

## 2.2 Major Biochemistry and Structural Biology

30 credits

| Nr | Course  | CRDT | Ref | MT1 | Session | Study |
|----|---|------|-----|-----|---------|-------|
| 1  | C003086 Proteomics<br><i>Bart Devreese -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 0</a>                                      | 3    |     | 1   | A:1     | 80    |
| 2  | C003670 Biomolecular Production Methods<br><i>Nico Callewaert -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 5</a>               | 4    |     | 1   | A:1     | 110   |
| 3  | C003088 Drug Design<br><i>Savvas Savvides -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 10</a>                                  | 3    |     | 1   | A:2     | 80    |
| 4  | C003615 Experimental Structural Biology<br><i>Savvas Savvides -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 0</a>               | 5    |     | 1   | A:2     | 135   |
| 5  | C003089 Project Biochemistry and Structural Biology<br><i>Elien De Bousser -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 40</a> | 6    |     | 1   | A:J     | 170   |
| 6  | C002695 Bionanotechnology<br><i>Kevin Braeckmans -- Department of Pharmaceutics</i><br><a href="#">Indicative price: € 0</a>  | 3    |     | 2   | A:1     | 80    |
| 7  | C002717 Metabolic Engineering<br><i>Alain Goossens -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 100</a>                           | 3    |     | 2   | A:1     | 80    |
| 8  | C002713 Glycobiology<br><i>Nico Callewaert -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 5</a>                                  | 3    |     | 2   | A:1     | 80    |

## 2.3 Major Biomedical Biotechnology

30 credits

[Subscribe to 30 credit units from the following list, with 6 credit units with reference a.](#)

| Nr | Course   | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1  | C002725 Molecular Pathophysiology and Experimental Therapy<br><i>Charlotte Scott -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a> | 6    |     | 1   | A:1     | 160   |
| 2  | C002738 Transgenetics of Animal Model Organisms<br><i>Kris Vleminckx -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 170</a>           | 6    |     | 1   | A:2     | 160   |
| 3  | C002708 Experimental Molecular Cell Biology<br><i>Rudi Beyaert -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>                   | 3    |     | 1   | A:2     | 80    |
| 4  | C003090 Project Biomedical Biotechnology<br><i>Jens Staal -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 40</a>                       | 6    |     | 1   | A:J     | 170   |
| 5  | C002716 Human Genetics and Genetic Diseases<br><i>Bruce Poppe -- Department of Biomolecular Medicine</i><br><a href="#">Indicative price: € 0</a>                | 3    |     | 2   | A:1     | 80    |

|   |         |   |   |   |   |     |    |
|---|---------|---|---|---|---|-----|----|
| 6 | C002722 | <b>Molecular Cancer Biology</b><br><i>Geert Berx -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>                            | 3 | a | 2 | A:1 | 80 |
| 7 | C002728 | <b>Neurobiology</b><br><i>Roosmarijn Vandenbroucke -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>                          | 3 | a | 2 | A:1 | 80 |
| 8 | C002699 | <b>Cellular Stress, Cell Death and Senescence</b><br><i>Peter Vandenabeele -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 15</a> | 3 | a | 2 | A:1 | 80 |
| 9 | C002720 | <b>Molecular and Experimental Immunology</b><br><i>Martin Guillems -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>          | 3 | a | 2 | A:1 | 80 |

## 2.4 Major Microbial Biotechnology

30 credits

| Nr | Course   | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1  | C002711 <b>Food Microbiology and Safety</b><br><i>Kurt Houf -- Department of Veterinary and Biosciences</i><br><a href="#">Indicative price: € 0</a>                               | 3    |     | 1   | A:1     | 80    |
| 2  | C004007 <b>Molecular Bacteria-Host Interactions</b><br><i>Petra Van Damme -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 10</a> | 3    |     | 1   | A:2     | 80    |
| 3  | C002715 <b>Host-Virus Interactions</b><br><i>Xavier Saelens -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 0</a>                | 3    |     | 1   | A:1     | 80    |
| 4  | C002719 <b>Microbial Genomics</b><br><i>Caroline De Tender -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 0</a>                 | 3    |     | 1   | A:2     | 80    |
| 5  | C002724 <b>Molecular Microbial Ecology</b><br><i>Marie Joossens -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 10</a>           | 3    |     | 1   | A:2     | 80    |
| 6  | C003092 <b>Project Microbial Biotechnology</b><br><i>Lisa Slachmuylders -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 40</a>   | 6    |     | 1   | A:J     | 170   |
| 7  | C004394 <b>Microbes in Biotechnology</b><br><i>Marie Joossens -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 15</a>             | 6    |     | 2   | A:1     | 150   |
| 8  | C002714 <b>Host-Parasite Interactions</b><br><i>Dirk de Graaf -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 0</a>              | 3    |     | 2   | A:1     | 80    |

## 2.5 Major Plant Biotechnology

30 credits

| Nr | Course  | CRDT | Ref | MT1 | Session | Study |
|----|---|------|-----|-----|---------|-------|
| 1  | C003095 <b>Plant Environment Interactions</b><br><i>Dominique Van Der Straeten -- Department of Biology</i><br><a href="#">Indicative price: € 1</a>                  | 3    |     | 1   | A:1     | 80    |
| 2  | C003097 <b>Plant Biotic Interactions</b><br><i>Sofie Goormachtig -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a> | 3    |     | 1   | A:2     | 80    |
| 3  | C003098 <b>The Plant Cell</b><br><i>Lieven De Veylder -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>            | 3    |     | 1   | A:2     | 80    |
| 4  | C003099 <b>Plant Growth and Development</b><br><i>Tom Beeckman -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>   | 3    |     | 1   | A:2     | 80    |
| 5  | C003100 <b>Molecular Plant Breeding</b><br><i>Tom Ruttink -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 97</a>       | 3    |     | 2   | A:1     | 80    |
| 6  | C003101 <b>Project Plant Biotechnology</b><br><i>Fien Lanssens -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 40</a>  | 6    |     | 1   | A:J     | 170   |

|   |         |   |   |   |     |    |
|---|---------|---|---|---|-----|----|
| 7 | C003102 | The Plant Factory<br><i>Frank Van Breusegem -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>      | 3 | 2 | A:1 | 80 |
| 8 | C003825 | Functional Plant Genomics<br><i>Klaas Vandepoele -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a> | 3 | 1 | A:1 | 80 |

### 2.5.1 Elective Course List Plant Biotechnology

3 credits

Subscribe to 3 credit units from the following list.

| Nr | Course   | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1  | C003618 Advanced Plant Biotic Interactions<br><i>Sofie Goormachtig -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>    | 3    |     | 2   | A:1     | 80    |
| 2  | C003163 Plant Yield<br><i>Hilde Nelissen -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>                              | 3    |     | 2   | A:1     | 80    |
| 3  | C002717 Metabolic Engineering<br><i>Alain Goossens -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 100</a>                  | 3    |     | 2   | A:1     | 80    |
| 4  | C004006 Advanced Plant Cell Biology and Signaling<br><i>Bert De Rybel -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a> | 3    |     | 2   | A:1     | 80    |

## 3 Elective Courses

30 credits

Subscribe to 1 minor from the following list. Subject to approval by the faculty.

### 3.1 Minor Research

30 credits

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

#### 3.1.1 Focus

Subscribe to no less than 21 and no more than 30 credit units from 1 focus from the following list.

Focus has to be different from the major.

Courses for which MT1 mentions '1' are mandatory and must be followed in the first master's year.

##### 3.1.1.1 Focus Bioinformatics and System Biology

Subscribe to no less than 21 and no more than 30 credit units from the following list, distributed over the first standard learning path as follows: 21 credit units in year 1.

| Nr | Course  | CRDT | Ref | MT1 | Session | Study |
|----|---|------|-----|-----|---------|-------|
| 1  | C002732 Programming for Bioinformatics<br><i>Pieter De Bleser -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>                                     | 6    |     | 1   | A:1     | 160   |
| 2  | C002700 Comparative Genomics<br><i>Klaas Vandepoele -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>                          | 3    |     | 1   | A:2     | 80    |
| 3  | C004456 Linux for Bioinformatics Environment<br><i>Herman De Beukelaer -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>       | 3    |     | 1   | A:2     | 80    |
| 4  | C003083 Bioinformatics Algorithms<br><i>Veerle Fack -- Department of Mathematics, Computer Science and Statistics</i><br><a href="#">Indicative price: € 0</a>                    | 3    |     | 1   | A:2     | 80    |
| 5  | C003084 Project Bioinformatics and Systems Biology<br><i>Herman De Beukelaer -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a> | 6    |     | 1   | A:J     | 170   |
| 6  | C003617 Modelling of Biological Systems<br><i>Steven Maere -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>                   | 3    |     | 2   | A:1     | 80    |
| 7  | C002703 Data Mining<br><i>Yvan Saeys -- Department of Mathematics, Computer Science and Statistics</i><br><a href="#">Indicative price: € 10</a>                                  | 3    |     | 2   | A:1     | 80    |
| 8  | C003085 Databases for Bioinformatics<br><i>Pieter De Bleser -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>                                       | 3    |     | 2   |         | 80    |

### 3.1.1.2 Focus Biochemistry and Structural Biology

Subscribe to no less than 21 and no more than 30 credit units from the following list, distributed over the first standard learning path as follows: 21 credit units in year 1.

| Nr | Course   | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1  | C003086 <b>Proteomics</b><br><i>Bart Devreese -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 0</a>                                      | 3    |     | 1   | A:1     | 80    |
| 2  | C003670 <b>Biomolecular Production Methods</b><br><i>Nico Callewaert -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 5</a>               | 4    |     | 1   | A:1     | 110   |
| 3  | C003088 <b>Drug Design</b><br><i>Savvas Savvides -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 10</a>                                  | 3    |     | 1   | A:2     | 80    |
| 4  | C003615 <b>Experimental Structural Biology</b><br><i>Savvas Savvides -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 0</a>               | 5    |     | 1   | A:2     | 135   |
| 5  | C003089 <b>Project Biochemistry and Structural Biology</b><br><i>Elien De Bousser -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 40</a> | 6    |     | 1   | A:J     | 170   |
| 6  | C002695 <b>Bionanotechnology</b><br><i>Kevin Braeckmans -- Department of Pharmaceutics</i><br><a href="#">Indicative price: € 0</a>  | 3    |     | 2   | A:1     | 80    |
| 7  | C002717 <b>Metabolic Engineering</b><br><i>Alain Goossens -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 100</a>                           | 3    |     | 2   | A:1     | 80    |
| 8  | C002713 <b>Glycobiology</b><br><i>Nico Callewaert -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 5</a>                                  | 3    |     | 2   | A:1     | 80    |

### 3.1.1.3 Focus Biomedical Biotechnology

Subscribe to no less than 21 and no more than 30 credit units from the following list, distributed over the first standard learning path as follows: 21 credit units in year 1.

| Nr | Course  | CRDT | Ref | MT1 | Session | Study |
|----|---|------|-----|-----|---------|-------|
| 1  | C002725 <b>Molecular Pathophysiology and Experimental Therapy</b><br><i>Charlotte Scott -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a> | 6    |     | 1   | A:1     | 160   |
| 2  | C002738 <b>Transgenetics of Animal Model Organisms</b><br><i>Kris Vleminckx -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 170</a>           | 6    |     | 1   | A:2     | 160   |
| 3  | C002708 <b>Experimental Molecular Cell Biology</b><br><i>Rudi Beyaert -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>                   | 3    |     | 1   | A:2     | 80    |
| 4  | C003090 <b>Project Biomedical Biotechnology</b><br><i>Jens Staal -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 40</a>                       | 6    |     | 1   | A:J     | 170   |
| 5  | C002716 <b>Human Genetics and Genetic Diseases</b><br><i>Bruce Poppe -- Department of Biomolecular Medicine</i><br><a href="#">Indicative price: € 0</a>                | 3    |     | 2   | A:1     | 80    |
| 6  | C002722 <b>Molecular Cancer Biology</b><br><i>Geert Berx -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>                                | 3    | a   | 2   | A:1     | 80    |
| 7  | C002728 <b>Neurobiology</b><br><i>Roosmarijn Vandenbroucke -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>                              | 3    | a   | 2   | A:1     | 80    |
| 8  | C002699 <b>Cellular Stress, Cell Death and Senescence</b><br><i>Peter Vandenabeele -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 15</a>     | 3    | a   | 2   | A:1     | 80    |
| 9  | C002720 <b>Molecular and Experimental Immunology</b><br><i>Martin Guillems -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>              | 3    | a   | 2   | A:1     | 80    |

### 3.1.1.4 Focus Microbial Biotechnology

Subscribe to no less than 21 and no more than 30 credit units from the following list, distributed over the first standard learning path as follows: 21 credit units in year 1.

| Nr | Course  | CRDT | Ref | MT1 | Session | Study |
|----|---|------|-----|-----|---------|-------|
| 1  | C002711 Food Microbiology and Safety<br><i>Kurt Houf -- Department of Veterinary and Biosciences</i><br><a href="#">Indicative price: € 0</a>                               | 3    |     | 1   | A:1     | 80    |
| 2  | C004007 Molecular Bacteria-Host Interactions<br><i>Petra Van Damme -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 10</a> | 3    |     | 1   | A:2     | 80    |
| 3  | C002715 Host-Virus Interactions<br><i>Xavier Saelens -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 0</a>                | 3    |     | 1   | A:1     | 80    |
| 4  | C002719 Microbial Genomics<br><i>Caroline De Tender -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 0</a>                 | 3    |     | 1   | A:2     | 80    |
| 5  | C002724 Molecular Microbial Ecology<br><i>Marie Joossens -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 10</a>           | 3    |     | 1   | A:2     | 80    |
| 6  | C003092 Project Microbial Biotechnology<br><i>Lisa Slachmuylders -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 40</a>   | 6    |     | 1   | A:J     | 170   |
| 7  | C004394 Microbes in Biotechnology<br><i>Marie Joossens -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 15</a>             | 6    |     | 2   | A:1     | 150   |
| 8  | C002714 Host-Parasite Interactions<br><i>Dirk de Graaf -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 0</a>              | 3    |     | 2   | A:1     | 80    |

### 3.1.1.5 Focus Plant Biotechnology

Subscribe to no less than 21 and no more than 30 credit units from the following list, distributed over the first standard learning path as follows: 21 credit units in year 1.

| Nr | Course   | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1  | C003095 Plant Environment Interactions<br><i>Dominique Van Der Straeten -- Department of Biology</i><br><a href="#">Indicative price: € 1</a>                  | 3    |     | 1   | A:1     | 80    |
| 2  | C003097 Plant Biotic Interactions<br><i>Sofie Goormachtig -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a> | 3    |     | 1   | A:2     | 80    |
| 3  | C003098 The Plant Cell<br><i>Lieven De Veylder -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>            | 3    |     | 1   | A:2     | 80    |
| 4  | C003099 Plant Growth and Development<br><i>Tom Beeckman -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>   | 3    |     | 1   | A:2     | 80    |
| 5  | C003100 Molecular Plant Breeding<br><i>Tom Ruttink -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 97</a>       | 3    |     | 2   | A:1     | 80    |
| 6  | C003101 Project Plant Biotechnology<br><i>Fien Lamsens -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 40</a>   | 6    |     | 1   | A:J     | 170   |
| 7  | C003102 The Plant Factory<br><i>Frank Van Breusegem -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>       | 3    |     | 2   | A:1     | 80    |
| 8  | C003825 Functional Plant Genomics<br><i>Klaas Vandepoele -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>  | 3    |     | 1   | A:1     | 80    |

### 3.1.2 Elective Courses

Subscribe to at most 9 credit units from no less than 1 and no more than 2 modules from the following list.

#### 3.1.2.1 Elective Course List

Subscribe to no more than 9 credit units from the following list.

| Nr | Course  | CRDT | Ref | MT1 | Session          | Study |
|----|---|------|-----|-----|------------------|-------|
| 1  | C002681 <b>Advanced Programming in Bioinformatics</b><br><i>Pieter De Bleser -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>  | 3    |     | 2   |                  | 80    |
| 2  | C002720 <b>Molecular and Experimental Immunology</b><br><i>Martin Guillems -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>  | 3    |     | 2   | A:1              | 80    |
| 3  | C002697 <b>Biotechnological Techniques in Medical Diagnostics</b><br><i>Dieter Deforce -- Department of Pharmaceutics</i><br><a href="#">Indicative price: € 0</a>  | 3    |     | 2   | B:2              | 80    |
| 4  | J000454 <b>Cutting Edge Technologies for Drug Delivery - Nanomedicines</b><br><i>Stefaan De Smedt -- Department of Pharmaceutics</i><br><a href="#">Indicative price: € 0</a>   | 3    |     | 2   | A:2              | 90    |
| 5  | C002699 <b>Cellular Stress, Cell Death and Senescence</b><br><i>Peter Vandenabeele -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 15</a>   | 3    |     | 2   | A:1              | 80    |
| 6  | C003311 <b>Phylogenetics</b><br><i>Olivier De Clerck -- Department of Biology</i><br><a href="#">Indicative price: € 0</a>  | 4    |     | 2   | A:1              | 120   |
| 7  | C002717 <b>Metabolic Engineering</b><br><i>Alain Goossens -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 100</a>  | 3    |     | 2   | A:1              | 80    |
| 8  | C002737 <b>The Eukaryotic Cell Cycle</b><br><i>Lieven De Veylder -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>   | 3    |     | 2   | A:1              | 80    |
| 9  | C002706 <b>Epigenetics</b><br><i>Wim Vanden Berghe -- Department of Molecular Biology</i><br><a href="#">Indicative price: € 0</a>  | 3    |     | 2   | A:1              | 80    |
| 10 | C002718 <b>Metabolomics [nl]</b><br><i>Kris Morreel -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 0</a>  | 3    |     | 2   | A:1              | 80    |
| 11 | C002727 <b>Molecular Simulations of Biosystems</b><br><i>Toon Verstraeten -- Department of Physics and Astronomy</i><br><a href="#">Indicative price: € 0</a>   | 3    |     | 2   | A:1              | 80    |
| 12 | C004455 <b>Advanced Biomolecular 3D-structure Determination by X-ray Crystallography and Cryo-Electron Microscopy</b><br><i>Kenneth Verstraete -- Department of Biochemistry, Physiology and Microbiology</i><br><a href="#">Indicative price: € 20</a> | 3    |     | 2   | A:1              | 80    |
| 13 | C003695 <b>Applied High-throughput Analysis</b><br><i>Tim De Meyer -- Department of Data Analysis and Mathematical Modelling</i><br><a href="#">Indicative price: € 0</a>   | 6    |     | 2   | A:1              | 180   |
| 14 | C004008 <b>Laboratory Animal Science</b><br><i>Katleen Hermans -- Department of Pathobiology, Pharmacology and Zoological Medicine</i><br><a href="#">Indicative price: € 0</a>   | 6    |     | 2   | A:1              | 180   |
| 15 | C004009 <b>History and Philosophy of Sciences [nl]</b><br><i>Maarten Van Dyck -- Department of Philosophy and Moral Sciences</i><br><a href="#">Indicative price: € 0</a>   | 3    |     | 2   | A:1 <sup>a</sup> | 90    |

### 3.1.2.2 Elective Courses UGent and other Universities

Subscribe to no more than 9 credit units from the study programmes of UGent including courses from the other majors or the [Ghent University elective courses](#), or courses from other universities of the Flemish Community or (online) courses from [Erasmus+ partner universities](#), distributed over the first standard learning path as follows: no more than 9 credit units in year 2.

## 3.2 Minor Interdisciplinary Combination

30 credits

| Nr | Course  | CRDT | Ref | MT1 | Session | Study |
|----|---|------|-----|-----|---------|-------|
| 1  | C003105 <b>Project Interdisciplinary Combination</b><br><i>Fien Lamsens -- Department of Plant Biotechnology and Bioinformatics</i><br><a href="#">Indicative price: € 40</a> | 6    |     | 1   | A:J     | 170   |

### 3.2.1 Elective Courses UGent or other Universities

24 credits

Subscribe to 24 credit units from the study programmes of UGent (no more than 9 credits from the own study programme), courses from other universities of the Flemish Community, or with the permission of the Study Programme Committee, from non-Flemish

universities within the ERASMUS+ programme.

The minor allow a focus on another discipline.

The courses must be included in a specific discipline, approved by the Study Programme Committee, and can not be a specialisation within the programme.

### 3.3 Minor Economics and Business Administration

30 credits

Subscribe to 30 credit units from no less than 1 and no more than 2 modules from the following list.

#### 3.3.1 General Courses

Subscribe to no less than 24 and no more than 30 credit units from the following list, distributed over the first standard learning path as follows: no more than 24 credit units in year 1.

Dare to Venture can be chosen if you have already subscribed to Introduction to Entrepreneurship.

| Nr | Course  | CRDT | Ref | MT1 | Session | Study |
|----|---|------|-----|-----|---------|-------|
| 1  | F000758 Economics [nl]<br><i>Bruno Merlevede -- Department of Economics</i><br><a href="#">Indicative price: € 50</a>   | 5    |     |     | A:1     | 150   |
| 2  | E076431 Introduction to Entrepreneurship<br><i>Petra Andries -- Department of Marketing, Innovation and Organisation</i><br><a href="#">Indicative price: € 33</a>    | 3    |     |     | A:1     | 90    |
| 3  | E076460 Dare to Venture<br><i>Johan Verrue -- Department of Marketing, Innovation and Organisation</i><br><a href="#">Indicative price: unknown</a>                   | 4    |     |     | A:2     | 120   |
| 4  | F000845 Business Administration [nl]<br><i>Mirjam Knockaert -- Department of Marketing, Innovation and Organisation</i><br><a href="#">Indicative price: € 35</a>     | 4    |     |     | A:2     | 120   |
| 5  | F000551 Business Skills<br><i>Mieke Audenaert -- Department of Marketing, Innovation and Organisation</i><br><a href="#">Indicative price: € 46</a>                   | 4    |     |     | C:2     | 120   |
| 6  | F000768 Marketing Management [nl]<br><i>Maggie Geuens -- Department of Marketing, Innovation and Organisation</i><br><a href="#">Indicative price: € 40</a>           | 6    |     |     | A:1     | 180   |
| 7  | F000855 Organization Theory<br><i>Gosia Kozusznik -- Department of Marketing, Innovation and Organisation</i><br><a href="#">Indicative price: € 46</a>               | 4    |     |     | A:2     | 120   |
| 8  | F001009 Business Cycles and Growth [nl]<br><i>Freddy Heylen -- Department of Economics</i><br><a href="#">Indicative price: € 65</a>                                  | 5    |     |     | A:1     | 150   |
| 9  | F001008 Markets and Prices [nl]<br><i>Dirk Van de gaer -- Department of Economics</i><br><a href="#">Indicative price: € 50</a>                                       | 5    |     |     | A:1     | 150   |
| 10 | F001010 Financial Markets and Institutions [nl]<br><i>Rudi Vander Vennet -- Department of Economics</i><br><a href="#">Indicative price: € 0</a>                      | 5    |     |     | A:2     | 150   |
| 11 | F000752 Environmental Economics and Policy [nl]<br><i>Brent Bleys -- Department of Economics</i><br><a href="#">Indicative price: € 55</a>                            | 4    |     |     | B:2     | 120   |
| 12 | F000859 Corporate Social Responsibility [nl]<br><i>Saskia Crucke -- Department of Marketing, Innovation and Organisation</i><br><a href="#">Indicative price: € 0</a> | 3    |     |     | A:2     | 90    |

#### 3.3.2 Elective Courses UGent or other Universities

Subscribe to no more than 6 credit units to be chosen from the study programmes of:

- UGent including the [Ghent University elective courses](#),
- Other higher education of the Flemish Community,
- [Erasmus+ partner universities](#) including the [ENLIGHT \(online\) elective courses](#).

## 4 Master's Dissertation

30 credits

| Nr | Course   | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1  | C002310 Master's Dissertation<br><i>N. N.</i><br><a href="#">Indicative price: unknown</a> | 30   |     | 2   | B:J     | 840   |



## Programme related study costs

Type: Laptop

Name: Laptop

Indicative price: € 700

Optional: No

Fulltime standard learning track year: 1

Additional information: <https://www.ugent.be/we/nl/voor-nieuwe-studenten/laptop>

### 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 |

### Learning materials

The prices stated are indicative and subject to fluctuations.

The list of learning materials per course unit can be found in the course sheets.