

First Year

Compulsory courses

SYST0002-1	<i>Linear systems</i> - Rodolphe SEPULCHRE	30	30	-	6
ELEN0062-1	<i>Applied Inductive Learning</i> - Pierre GEURTS, Louis WEHENKEL	30	30	-	6
GBIO0009-1	<i>Bio-informatics</i> - Kristel VAN STEEN	30	30	-	6

Optional courses

Choose one module among the following, according to the student's former training and in agreement of the Council of studies :

Module for the Bachelors in Computer Science

Upgrading course

BIOL0203-1	<i>Introduction to cell biology</i> - Marc THIRY	20	-	-	2
CHIM0632-1	<i>Chemistry</i> - André LUXEN	30	30	-	6
BIOC0002-2	<i>Biochemistry</i> - Paulette CHARLIER	30	40	-	7
CHIM0623-1	<i>Physical chemistry applied to biochemistry</i> - Edwin DE PAUW	10	10	-	2
GENE0210-3	<i>Genetics and molecular biology</i> - Marc MULLER	30	40	-	7

Specialisation courses

INFO0004-1	<i>Programming Languages: From Text to Execution</i> (english) - Justus PIATER	30	30	-	6
INFO0063-1	<i>Object-Oriented Software Engineering</i> - Bernard BOIGELOT	30	30	-	6
INFO0016-1	<i>Introduction to the Theory of Computation</i> (english) - Pierre WOLPER	30	30	-	6

Module for the Bachelors in Chemical Sciences

Upgrading course

INFO0062-1	<i>Object-Oriented Programming</i> - Bernard BOIGELOT	30	30	-	6
INFO0902-1	<i>Data structures and algorithms</i> (english) - Justus PIATER	30	30	-	6
INFO0009-1	<i>Introduction to Data Bases</i> - Pierre WOLPER	30	30	-	6
INFO0016-1	<i>Introduction to the Theory of Computation</i> (english) - Pierre WOLPER	30	30	-	6

Specialisation courses

BIOC0719-2	<i>Enzymology</i> - André MATAGNE	15	25	-	5
BIOC0712-1	<i>Interactions in biological macromolecules</i> - Moreno GALLEN	20	20	-	4
GENE0001-2	<i>Genetic engineering</i> - Jacques DOMMES, Joseph MARTIAL	30	-	-	5
GENE0210-4	<i>Genetics and molecular biology</i> - Marc MULLER	20	20	-	4

Module for the Bachelors in Biological Sciences

Upgrading course

INFO0062-1	<i>Object-Oriented Programming</i> - Bernard BOIGELOT	30	30	-	6
INFO0902-1	<i>Data structures and algorithms</i> (english) - Justus PIATER	30	30	-	6
INFO0009-1	<i>Introduction to Data Bases</i> - Pierre WOLPER	30	30	-	6
MATH0232-3	<i>Complements of General Mathematics (calculus II)</i> - Françoise BASTIN	30	30	-	6

Specialisation courses

BIOC0719-2	<i>Enzymology</i> - André MATAGNE	15	25	-	5
BIOC0712-1	<i>Interactions in biological macromolecules</i> - Moreno GALLEN	20	20	-	4
GENE0001-2	<i>Genetic engineering</i> - Jacques DOMMES, Joseph MARTIAL	30	-	-	5
GENE0433-1	<i>Evolution and population genetics</i> - Vincent DEMOULIN, Johan MICHAUX, Claire REMACLE - Suppl : Denis BAURAIN	20	20	-	4

Second Year

Compulsory courses

STAT0750-1	<i>Multivariate statistical analysis</i> - Adelin ALBERT	10	10	-	2
CHIM0624-1	<i>Structure of biological macromolecules (general experimental aspects) : part a</i> - Paulette CHARLIER, Christian DAMBLON, Edwin DE PAUW	20	10	-	3
GBIO0015-1	<i>A tour in genetic epidemiology</i> - Kristel VAN STEEN	15	15	-	3

GBIO0017-1	<i>Identification of biological processes and networks</i> - Dominique TOYE	10	10	-	2
SMEM0023-1	<i>Final thesis</i> - COLLÉGIALITÉ	-	-	-	20

Research Focus

Compulsory courses

CHIM0625-1	<i>Molecular mechanics and molecular dynamics</i> - Dominique DEHARENG	10	10	-	2
GENE0434-1	<i>Experimental genomic techniques</i> - Michel GEORGES	10	10	-	2
GBIO0007-1	<i>Gene sequencing and protein analysis: part a</i> - Bernard JORIS	10	10	-	2
INFO0114-1	<i>Programming project</i> - Justus PIATER	-	50	-	5
STRA0014-1	<i>Documentation and seminars</i> - N...	-	-	-	3

Optional courses

Choose one module from :

Structural Biology Module

CHIM0627-1	<i>Structure of biological macromolecules (experimental aspects): part b1 (RX, NMR)</i> - Paulette CHARLIER, Christian DAMBLON	15	10	-	3
CHIM0628-1	<i>Structure of biological macromolecules (experimental aspects) part b2 (mass spectrometry)</i> - Edwin DE PAUW	15	10	-	3
CHIM0629-1	<i>Structure of biological macromolecules (experimental aspects): part b3 (AFM)</i> - Anne-Sophie DUWEZ	10	10	-	2

Choose courses totalling 8 ECTS from the following :

- [...] the courses of the Systemic Biology module
- [...] the courses on the Modelisation of macroscopic ensembles module
- [...] the courses of the Genomics and Proteomics module
- [...] List of complementary courses
- [...] One course of maximum 5 credits, chosen in accordance with the Board of Studies in the courses' programme of the Sciences Faculty, Applied Sciences Faculty, Medicine Faculty or of the Veterinary Faculty of the ULg, or in the courses' programme of the 2nd year of the Master in bioinformatics and modelling organised in another university of French-speaking Community of Belgium (FUNDP, UCL, ULB)

Systemic Biology Module

ELEN0061-2	<i>Introduction to Stochastic Processes</i> - Louis WEHENKEL	15	15	-	3
GBIO0016-1	<i>Introduction to systems biology</i> - Eric BULLINGER, Rodolphe SEPULCHRE	30	30	-	5

Choose courses totalling 8 ECTS from the following :

- [...] the courses of the Structural Biology module.
- [...] the courses on the Modelisation of macroscopic ensembles module
- [...] the courses of the Genomics and Proteomics module
- [...] List of complementary courses
- [...] One course of maximum 5 credits, chosen in accordance with the Board of Studies in the courses' programme of the Sciences Faculty, Applied Sciences Faculty, Medicine Faculty or of the Veterinary Faculty of the ULg, or in the courses' programme of the 2nd year of the Master in bioinformatics and modelling organised in another university of French-speaking Community of Belgium (FUNDP, UCL, ULB)

Modelling of Macroscopic Systems Module

SYST0019-1	<i>Modelling of (bio)chemical systems</i> - Dominique TOYE	10	10	-	2
MECA0055-6	<i>Numerical methods applied to the environment</i> - Jean-Marie BECKERS	10	10	-	2
GENE0433-1	<i>Evolution and population genetics</i> - Vincent DEMOULIN, Johan MICHAUX, Claire REMACLE - Suppl : Denis BAURAIN	20	20	-	4

Choose courses totalling 8 ECTS from the following :

- [...] the courses of the Structural Biology module.
- [...] the courses of the Systemic Biology module
- [...] the courses of the Genomics and Proteomics module
- [...] List of complementary courses
- [...] One course of maximum 5 credits, chosen in accordance with the Board of Studies in the courses' programme of the Sciences Faculty, Applied Sciences Faculty, Medicine Faculty or of the Veterinary Faculty of the ULg, or in the courses' programme of the 2nd year of the Master in bioinformatics and modelling organised in another university of French-speaking Community of Belgium (FUNDP, UCL, ULB)

Genomic and Proteomic Module

GENE0435-1	<i>Genomics</i> - Michel GEORGES, Joseph MARTIAL	10	10	-	2
CHIM0630-1	<i>Proteomics</i> - Edwin DE PAUW	10	10	-	2
GENE0436-1	<i>Statistic Genetic</i> - Michel GEORGES	10	10	-	2

Choose courses totalling 10 credits out of the following :

- [...] the courses of the Structural Biology module.
- [...] the courses of the Systemic Biology module
- [...] the courses on the Modelisation of macroscopic ensembles module
- [...] List of complementary courses
- [...] One course of maximum 5 credits, chosen in accordance with the Board of Studies in the courses' programme of the Sciences Faculty, Applied Sciences Faculty, Medicine Faculty or of the Veterinary Faculty of the ULg, or in the courses' programme of the 2nd year of the Master in bioinformatics and modelling organised in another university of French-speaking Community of Belgium (FUNDP, UCL, ULB)

Complementary courses

GBIO0011-1	<i>Biological systems modeling</i> - Pierre DAUBY, Rodolphe SEPULCHRE	30	30	-	5
BIOC0714-1	<i>Production of recombinant proteins in eukaryotic systems</i> - Jacques DOMMES	15	-	-	2
GENE0437-1	<i>The phylogenetic reconstruction</i> - Vincent DEMOULIN	12	12	-	2
CHIM0631-1	<i>Quantum chemistry and molecular models</i> - Dominique DEHARENG	10	10	-	2
SYST0017-1	<i>Non linear systems</i> - Rodolphe SEPULCHRE	30	30	-	4