

Cycle view of the study programme

B1 Or Th Pr Au Cr

Cours au choix de la finalité (B2 : 27Cr)

Period 1 and 2

Choice n°1:

Choose one module from : (B2 : 6Cr)

CHIM2.11 Food supplements

GBLX0058-1	<i>Complement of food formulations engineering and sensory analysis</i> - Christophe BLECKER	B2	Q1	12	6	-	2
GBLX0059-2	<i>Logistics in food industry</i> - Mohamed AYADI - [3h FT, 4h SEM]	B2	Q1	9	6	[+]	2
GBLX0060-2	<i>Microbial ecology of water and wastewater</i> (english language) - Frank DELVIGNE - [2h SEM]	B2	Q1	7	9	[+]	2

CHIM2.12 From gene to protein

CHIM0716-1	<i>From gene to protein</i> - Magali DELEU, Patrick FICKERS, Sébastien MASSART, Martine SCHROYEN, Luc WILLEMS - [12h AUTR]	B2	Q1	12	24	[+]	6
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CHIM2.24 Extraction, purification, characterization and valuation of biosourced molecules

CHIM0722-1	<i>Extraction, purification, characterization and valorization of biosourced molecules</i> (english language) - Christian DAMBLON, MarieLaure FAUCONNIER, Manon GENVA, Loïc QUINTON, Aurore RICHEL	B2	Q1	4	36	-	6
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[...] Possibility to choose between 2 and 6 credits from the list of replacement courses

Choice n°2:

Choose one module from : (B2 : 9Cr)

CHIM2.14 Microbial biotechnology - applications

CHIM0719-1	<i>Microbial biotechnology - applications</i> (english language) - Frank DELVIGNE, Patrick FICKERS, Philippe JACQUES, Marc ONGENA - [96h Proj.]	B2	Q1	2	-	[+]	9
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CHIM2.15 Food Science

ALIM0006-1	<i>Food science</i> - Christophe BLECKER, Sabine DANTHINE - [6h AUTR]	B2	Q1	32	32	[+]	7
ALIM0018-1	<i>Food analysis</i> (english language) - Giorgia PURCARO	B1	Q1	3	15	-	2

[...] Possibility to choose between 2 and 6 credits from the list of replacement courses

Choice n°3:

Choose one module for 4 credits among: (B2 : 4Cr)

CHIM2.16 Chemical contaminants analysis and risks of explosions

CHIM0720-1	<i>Analysis of chemical contaminants</i> (english language) - Giorgia PURCARO - [2h AUTR]	B2	Q1	-	16	[+]	2
CHIM0692-1	<i>Risks of using phytopharmaceutical products and biocides</i> - Jeroen MEERSMANS - [6h SEM]	B2	Q1	12	-	[+]	2

CHIM2.17 Multivaried analysis

INFO8008-1	<i>Multivaried analysis 2: data mining and machine learning</i> (english language) - Yves BROSTAU, Juan Antonio FERNANDEZ PIERNA, Hélène SOYEURT	B2	Q1	12	26	-	4
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Notice : can only be chosen once in the curriculum

[...] Possibility to choose between 2 and 4 credits from the list of replacement courses

Choix n° 4 :

Choose one module for 4 credits: (B2 : 4Cr)

CHIM2.18 Chemistry of bioenergy production

CHIM9316-1 *Chemistry of bioenergy production, Introduction* (english language) - B2 Q1 1 48 - 4
Aurore RICHEL

CHIM2.19 Applied immunology

CHIM9325-1 *Applied immunology* - Malik HAMAÏDIA, Marc ONGENA, B2 Q1 12 24 - 4
Luc WILLEMS

CHIM2.20 Machine learning

INFO8008-1 *Multivaried analysis 2: data mining and machine learning* (english language) - Yves BROSTAU, Juan Antonio FERNANDEZ PIERNA, B2 Q1 12 26 - 4
Hélène SOYEURT

Notice : can only be chosen once in the curriculum

[...] Possibility to choose between 2 and 4 credits from the list of replacement courses

Choose a language module from : (B2 : 4Cr)

Periods 3 and 4

CHIM 2.31 English (B2 : 4Cr)

LANG2955-2 *Pratique de l'anglais de spécialité en chimie et bio-industries* B2 TA - 12 [+] 4
(niveau C1 - Présentation) - Sophie DEPOTERRE, Estelle MAYARD -
[36h AUTR]

All year round

CHIM 2.32 Dutch (B2 : 4Cr)

LANG9914-1 *Dutch Intermediate Level* (dutch language) - Catherine PEETERS B2 TA 18 18 - 4

CHIM 2.33 Spanish (B2 : 4Cr)

LANG9915-1 *Spanish - beginners* - Valérie COYETTE B2 TA 18 18 - 4

Possibility to choose between 2 and 6 credits among the following courses, replacing the B2 elective courses:

ENVT3129-1 *Evaluating sustainability* - Andrea DI MARIA, Angélique LÉONARD - B2 Q2 12 16 [+] 3
[2h SEM]

ENVT3050-1 *Quantification of ecosystem services* - Marc DUFRÊNE - [6h AUTR] B2 Q1 9 5 [+] 2

BIOD0001-3 *Biodiversity management* - Arnaud MONTY - [6h SEM] B2 Q1 18 - [+] 2

VEGE0037-1 *Innovative system of plant production* B2 Q2 6
- *Urban agriculture* - Haïssam JIJAKLI 13 13 -
- *Developmental physiology applied to plant productions* - 12 - [+]
Pierre DELAPLACE - [6h FT]
- *Physical parameters control of plant productions in controlled*
conditions - Vincent LEEMANS 9 - -

VEGE0028-1 *Methods for managing plant health* - Frédéric FRANCIS, B2 Q2 42 15 - 6
Olivier GUELTON, Eric HAUBRUGE, François HENRIET,
Haïssam JIJAKLI, Sébastien MASSART, François VERHEGGEN

Notice : The juries for the Masters in Bioengineering reserve the right not to organise specific classes if they are chosen by fewer than five students.

Cours obligatoires du tronc commun (B1 : 60Cr, B2 : 33Cr)

Periods 1 and 2

CHIM1.10 Multivaried analysis

STAT1213-1 *Multivariate analysis 1: data exploration and structuring* - Yves BROSTAUX B1 Q1 9 9 - 2

CHIM1.11 Analytical Chemistry : instrumental techniques

CHIM9246-2 *Chemical analysis : instrumental techniques (english language)* - Giorgia PURCARO - [5h SEM] B1 Q1 21 28 [+] 6

CHIM1.12 Food preservation and safety

ALIM0001-1 *Food hygiene* - Mohamed AYADI - [2h SEM] B1 Q1 10 6 [+] 2

ALIM0015-1 *Food sanitary safety* - Mohamed AYADI - [2h SEM] B1 Q1 16 6 [+] 2

ALIM0017-1 *Agro-food engineering procedures* - Sabine DANTHINE, Nicolas JACQUET B1 Q1 24 24 - 4

CHIM1.13 Applied genoproteomics

CHIM0715-1 *Applied genoproteomics (english language)* - Magali DELEU, Patrick FICKERS, Sébastien MASSART, Luc WILLEMS - [6h AUTR] B1 Q1 18 - [+] 2

CHIM1.14 Biological chemistry and processes engineering

CHIM0718-1 *Biological chemistry and corresponding processes engineering, Introduction (english language)* - Aurore RICHEL - [2h FT] B1 Q1 16 23 [+] 5

CHIM1.15 Nutrition

ALIM0010-3 *Food, human nutrition and dietetics (english language)* - Jérôme BINDELLE B1 Q1 18 - - 2

Corequisite :

LANG2954-1 - *Pratique de l'anglais scientifique de bioingénieur (CHIB) (niveau B2+)*

Periods 3 and 4

CHIM1.30 Core curriculum Q2

MANA0004-1 *Portfolio (Master)* - Yves BECKERS, Hugues CLAESSENS, Gilles COLINET, Aurore DEGRÉ, Dorothée GOFFIN - [24h AUTR] B1 TA - - [+] 2

LANG2954-1 *Practice of Scientific English for bioengineers (CHIB) (level B2+)* - Sophie DEPOTERRE - [36h AUTR] B1 TA - 12 [+] 4

Corequisite :

CHIM9245-1 - *Advanced chromatographic techniques*

CHIM9254-1 - *Practice of natural product chemistry*

ALIM0010-3 - *Food, human nutrition and dietetics*

CHIM1.31 Microbial processes and interactions

CHIM0717-1 *Microbial processes and interactions (english language)* - Frank DELVIGNE, Patrick FICKERS, Philippe JACQUES, Marc ONGENA, JeanClaude TWIZERE - [9h AUTR] B1 Q2 57 18 [+] 8

CHIM1.32 Engineering and scaling conservation procedures

INGE0014-1 *Engineering and scaling conservation procedures* - Nicolas JACQUET, Paul MALUMBA KAMBA - [6h AUTR] B1 Q2 6 12 [+] 2

INGE0002-1 *Refrigeration and drying* - Nicolas JACQUET, Paul MALUMBA KAMBA B1 Q2 18 6 - 2

CHIM1.33 Food industry technologies

ALIM0012-1 *Technology of fats* - Sabine DANTHINE - [3h FT] B1 Q2 18 30 [+] 4

Period 3

CHIM1.34 Food engineering

ALIM0007-1 *Physical chemistry of formulations* - Christophe BLECKER B1 Q2 16 8 - 2

ALIM0005-1 *Food formulations engineering* - Christophe BLECKER B1 Q2 16 8 - 2

CHIM1.35 Practical chemistry of natural substances

CHIM9245-1 *Advanced chromatographic techniques* (english language) - Giorgia PURCARO B1 Q2 15 3 - 2

Corequisite :

LANG2954-1 - Pratique de l'anglais scientifique de bioingénieur (CHIB) (niveau B2+)

CHIM9246-2 - Chemical analysis : instrumental techniques

CHIM9254-1 *Practice of natural product chemistry* (english language) - Manon GENVA, Aurore RICHEL B1 Q2 3 35 - 4

Corequisite :

LANG2954-1 - Pratique de l'anglais scientifique de bioingénieur (CHIB) (niveau B2+)

CHIM1.36 Immunology

CHIM9321-1 *Immunology* - Bénédicte MACHIELS B1 Q2 27 - - 3

Period 4

AGRO2.30 Final work and internship

RTFE2008-1 *Thesis in chemistry and bio-industries* - Giorgia PURCARO B2 Q2 - - - 24

RSTG0002-1 *Internship and professional relations* - Catherine COLAUX, Thomas DOGOT, Patrick FICKERS B2 TA 12 - - 8

CHIM2.10 Research project and entrepreneurship

CHIM9324-1 *Research projects or entrepreneurship* - Philippe JACQUES - [8h AUTR] B2 Q1 2 2 [+] 1

Optional activities (B1 : 14Cr, B2 : 4Cr)

RSTG0011-1 *Additional internship* - Aurore DEGRÉ B1 TA - - - 5

HULG9547-1 *French course for IN mobility students (S1)* - N... B1 Q1 - - - 3

HULG9548-1 *French course for IN mobility students (S2)* - N... B1 Q2 - - - 3

HULG9546-1 *Erasmus: integration weeks* - N... B1 Q1 - - - 3

INFO9013-1 *Multivaried analysis 3: Data mining et Machine Learning: advanced* (english language) - Yves BROSTAUX, David COLIGNON, Benoît MERCATORIS, Hélène SOYEURT B2 Q2 12 28 - 4

Notice : INFO8001-1 prerequisite of the INFO9013-1 course

Additional ECTS Master in chemistry and bio-industries

Compulsory courses (B0 : 60Cr)

Common core courses

GEST3028-2 *Accounting and management* - Thomas DOGOT B0 Q1 22 26 - 4

GEST3773-1 *Management of quality* - Mohamed AYADI, Sébastien MASSART - [6h AUTR] B0 Q1 18 - [+] 2

STAT2004-1 *Applied statistics : First part* - Yves BROSTAUX B0 Q1 12 12 - 2

STAT2005-1 *Applied statistic : Second part* - Yves BROSTAUX B0 Q2 12 12 - 2

Corequisite :

STAT2004-1 - Statistique appliquée : 1ère partie

PSYC5897-3 *Team, organization and change* - Daniel FAULX, Véronique JANS, B0 TA 4 - [+] 2

Tiber MANFREDINI - [44h SEM]

Corequisite :

MANA0003-1 - Portfolio (Bachelier)

GEST3773-1 - Gestion de la qualité

GEST3028-2 - Comptabilité et gestion des entreprises

MANA0003-1	<i>Portfolio (Bachelor)</i> - Yves BECKERS, Hugues CLAESSENS, Gilles COLINET, Aurore DEGRÉ, Dorothée GOFFIN - [24h AUTR]	B0	TA	-	-	[+]	2
	Corequisite : PSYC5897-3 - Equipe, organisation & changement						
RSTG0008-1	<i>Internship (Bachelor)</i> - Hélène SOYEURT - [18h AUTR]	B0	TA	6	-	[+]	2
	Corequisite : PSYC5897-3 - Equipe, organisation & changement GEST3028-2 - Comptabilité et gestion des entreprises GEST3773-1 - Gestion de la qualité						
BIOL2044-1	<i>Plant physiology</i> - Patrick DU JARDIN	B0	Q1	27	9	-	3
BIOL2013-2	<i>General microbiology, Introduction</i> - Patrick FICKERS, Philippe JACQUES	B0	Q1	16	8	-	2
ENVT2044-1	<i>General ecology</i> - Grégory MAHY, Arnaud MONTY	B0	Q1	24	-	-	2
INFO2038-1	<i>Computer science and algorithmic</i> - Hélène SOYEURT	B0	Q1	2	22	-	2
MATH2016-1	<i>General mathematics and modelling of dynamics systems</i> - Jérôme BINDELLE, Catherine CHARLES, Frank DELVIGNE, Adeline FAYOLLE, Benoît MERCATORIS - Suppl : Gauthier LIGOT	B0	Q1	24	24	-	4
PHYS3036-1	<i>Environmental physics</i> - Bernard LONGDOZ	B0	Q1	18	18	-	3
LANG2966-2	<i>English language: level 3</i> - Sophie DEPOTERRE, Estelle MAYARD, Fiona THEWISSEN - [48h E-Lrng]	B0	TA	-	24	[+]	4
INGE0008-1	<i>Multidisciplinary experimental project</i> - Yves BROSTAUX, Pierre DELAPLACE, Sébastien MASSART, Benoît MERCATORIS, Jacques MIGNON, Arnaud MONTY - [60h AUTR]	B0	TA	6	6	[+]	6
	Corequisite : ENVT2044-1 - Ecologie générale BIOL2044-1 - Physiologie végétale GEST3773-1 - Gestion de la qualité STAT2004-1 - Statistique appliquée : 1ère partie STAT2005-1 - Statistique appliquée : 2ème partie						

Subject : Chemistry and bioindustry

BIAA0003-1	<i>Modelling physical and biological processes</i> - Frank DELVIGNE	B0	Q2	24	-	-	2
BIOL2015-3	<i>Molecular biology</i> - Patrick FICKERS	B0	Q2	24	-	-	2
	Corequisite : BIOL2016-3 - Génétique générale						
BIOL2016-3	<i>General genetics</i> - Nicolas GENGLER, Ludivine LASSOIS	B0	Q2	12	12	-	2
	Corequisite : BIOL2015-3 - Biologie moléculaire						
BIOL2019-1	<i>Theoretical chemistry and physics applied to biomolecules structural analysis</i> - Christian DAMBLON, Loïc QUINTON	B0	Q2	24	24	-	4
CHIM9269-2	<i>Catalysis</i> - MarieLaure FAUCONNIER - [2h AUTR]	B0	Q2	6	12	[+]	2
CHIM9242-4	<i>Fundamentals of quantitative analytical chemistry</i> - Giorgia PURCARO	B0	Q2	16	32	-	4
ALIM0013-2	<i>Techniques of food preservation</i> - Christophe BLECKER	B0	Q2	24	-	-	2
	Prerequisite : BIAA0002-1 - Technologie agricole et alimentaire						

Optional activity (B0 : 5Cr)

