

Cycle view of the study programme

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Notice : The Master's juries in bioengineering reserve the right not to organise elective courses if they are selected by fewer than five students.

Core curriculum compulsory courses (B1 : 60Cr, B2 : 33Cr)

Periods 1 and 2

CHIM1.10 Multivaried analysis

STAT1213-1	<i>Multivariate analysis 1: data exploration and structuring -</i> Yves BROSTAUX	B1	Q1	9	9	-	2
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CHIM1.11 Analytical Chemistry : instrumental techniques

CHIM9246-2	<i>Chemical analysis : instrumental techniques (english language) -</i> Giorgia PURCARO - [5h SEM]	B1	Q1	21	28	[+]	6
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CHIM1.12 Food preservation and safety

ALIM0001-1	<i>Food hygiene -</i> Mohamed AYADI, Georges DAUBE - [2h SEM]	B1	Q1	10	6	[+]	2
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ALIM0015-1	<i>Food sanitary safety -</i> Mohamed AYADI - [2h SEM]	B1	Q1	16	6	[+]	2
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ALIM0017-1	<i>Agro-food engineering procedures -</i> Sabine DANTHINE, Nicolas JACQUET	B1	Q1	24	24	-	4
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CHIM1.13 Applied genoproteomics

CHIM0715-1	<i>Applied genoproteomics (english language) -</i> Magali DELEU, Patrick FICKERS, Sébastien MASSART, Luc WILLEMS	B1	Q1	18	6	-	2
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CHIM1.14 Biological chemistry and processes engineering

CHIM0718-1	<i>Biological chemistry and corresponding processes engineering,</i> <i>Introduction (english language) -</i> Aurore RICHEL - [2h FT]	B1	Q1	16	23	[+]	5
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CHIM1.15 Nutrition

ALIM0010-3	<i>Food, human nutrition and dietetics (english language) -</i> Jérôme BINDELLE	B1	Q1	18	-	-	2
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Corequisite :

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

Periods 3 and 4

CHIM1.30 Core curriculum Q2

MANA0004-1	<i>Portfolio (Master) -</i> Yves BECKERS, Hugues CLAESSENS, Gilles COLINET, Pierre DELAPLACE, Dorothée GOFFIN - [24h AUTR]	B1	TA	-	-	[+]	2
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LANG2954-1	<i>Practice of Scientific English for bioengineers (CHIB) (level B2+) -</i> Estelle MAYARD, Lelania SPERRAZZA - [36h AUTR]	B1	TA	-	12	[+]	4
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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

CHIM9334-1	<i>Bioprocess engineering (english language) -</i> Frank DELVIGNE	B1	Q2	24	18	-	4
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CHIM9335-1	<i>Downstream processing operations -</i> Patrick FICKERS	B1	Q2	20	4	-	2
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CHIM9336-1	<i>Applied microbial ecology (english language) -</i> Marc ONGENA	B1	Q2	20	4	-	2
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CHIM1.32 Engineering and scaling conservation procedures

INGE0014-1	<i>Engineering and scaling conservation procedures -</i> Nicolas JACQUET, Paul MALUMBA KAMBA - [6h AUTR]	B1	Q2	6	12	[+]	2
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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* - Pierre DELAPLACE 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 : INFO8008-2: prerequisite for the course INFO9013-1

Focus optional courses (B2 : 27Cr)

Period 1 and 2

Choice n°1:

Choose one module from : (B2 : 6Cr)

CHIM2.11 Food supplements

GBLX0058-1 *Complement of food formulations engineering and sensory analysis* - 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>Food and environmental biotechnology</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, Malik HAMAÏDIA, 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

ENVT3129-1	<i>Evaluating sustainability</i> - Andrea DI MARIA - [2h SEM]	B2	Q2	12	16	[+]	3
ENVT3050-1	<i>Quantification of ecosystem services</i> - Marc DUFRÊNE - [6h AUTR]	B2	Q1	9	5	[+]	2
BIOD0001-3	<i>Biodiversity management</i> - Arnaud MONTY - [6h SEM]	B2	Q1	18	-	[+]	2
VEGE0037-1	<i>Innovative system of plant production</i> - Urban agriculture - Haissam JIJAKLI - Developmental physiology applied to plant productions - Pierre DELAPLACE - [6h FT] - Physical parameters control of plant productions in controlled conditions - Vincent LEEMANS	B2	Q2	13	13	-	6
				12	-	[+]	
				9	-	-	
VEGE0028-1	<i>Methods for managing plant health</i> - Frédéric FRANCIS, Olivier GUELTON, Eric HAUBRUGE, Haissam JIJAKLI, Sébastien MASSART, François VERHEGGEN	B2	Q2	42	15	-	6

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	B2	Q1	3	15	-	2

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

ENVT3129-1	<i>Evaluating sustainability</i> - Andrea DI MARIA - [2h SEM]	B2	Q2	12	16	[+]	3
ENVT3050-1	<i>Quantification of ecosystem services</i> - Marc DUFRÊNE - [6h AUTR]	B2	Q1	9	5	[+]	2
BIOD0001-3	<i>Biodiversity management</i> - Arnaud MONTY - [6h SEM]	B2	Q1	18	-	[+]	2
VEGE0037-1	<i>Innovative system of plant production</i> - Urban agriculture - Haissam JIJAKLI - Developmental physiology applied to plant productions - Pierre DELAPLACE - [6h FT] - Physical parameters control of plant productions in controlled conditions - Vincent LEEMANS	B2	Q2	13	13	-	6
				12	-	[+]	
				9	-	-	
VEGE0028-1	<i>Methods for managing plant health</i> - Frédéric FRANCIS, Olivier GUELTON, Eric HAUBRUGE, Haissam JIJAKLI,	B2	Q2	42	15	-	6

ASSART, François VERHEGGEN

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

INFO8008-2	<i>Multivaried analysis 2: data mining et machine learning</i> (english language) - <i>Introduction</i> - Yves BROSTAUX, Juan Antonio FERNANDEZ PIERNA, Hélène SOYEURT - <i>In-depth study</i> - Yves BROSTAUX, Juan Antonio FERNANDEZ PIERNA, Hélène SOYEURT	B2	Q1				4
			9	18	-		
			3	6	-		

Notice : can only be chosen once in the curriculum

Choice no. 4:

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

CHIM2.18 Chemistry of bioenergy production

CHIM9316-1	<i>Chemistry of bioenergy production, Introduction</i> (english language) - Aurore RICHEL	B2	Q1	1	48	-	4
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CHIM2.19 Applied immunology

CHIM9325-1	<i>Applied immunology</i> - Malik HAMAÏDIA, Marc ONGENA, Sandra ORMENESE, Luc WILLEMS	B2	Q1	12	24	-	4
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CHIM2.20 Machine learning

INFO8008-2	<i>Multivaried analysis 2: data mining et machine learning</i> (english language) - <i>Introduction</i> - Yves BROSTAUX, Juan Antonio FERNANDEZ PIERNA, Hélène SOYEURT - <i>In-depth study</i> - Yves BROSTAUX, Juan Antonio FERNANDEZ PIERNA, Hélène SOYEURT	B2	Q1				4
			9	18	-		
			3	6	-		

Notice : can only be chosen once in the curriculum

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

All year round

CHIM 2.31 English (B2 : 4Cr)

LANG2955-2	<i>Specialised English for chemistry and bio-industries (level C1 - Presentation)</i> - Estelle MAYARD, Lelania SPERRAZZA - [36h AUTR]	B2	TA	-	12	[+]	4
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CHIM 2.32 Dutch (B2 : 4Cr)

LANG9914-1	<i>Dutch Intermediate Level</i> (dutch language) - Catherine PEETERS	B2	TA	18	18	-	4
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CHIM 2.33 Spanish (B2 : 4Cr)

LANG9915-1	<i>Spanish - beginners</i> - Valérie COYETTE	B2	TA	18	18	-	4
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Bridging courses Master in chemistry and bio-industries

Compulsory courses (B0 : 60Cr)

Common core courses

GEST3028-2	<i>Accounting and management</i> - Thomas DOGOT	B0	Q1	22	26	-	4
GEST3773-1	<i>Management of quality</i> - Mohamed AYADI, Sébastien MASSART - [6h AUTR]	B0	Q1	18	-	[+]	2
STAT2004-1	<i>Applied statistics : First part</i> - Yves BROSTAUX	B0	Q1	12	12	-	2
STAT2005-1	<i>Applied statistic : Second part</i> - Yves BROSTAUX	B0	Q2	12	12	-	2
Corequisite : STAT2004-1 - Statistique appliquée : 1ère partie							
PSYC5897-3	<i>Team, organization and change</i> - Daniel FAULX, Tiber MANFREDINI, Elise SEGHERS - [44h SEM]	B0	TA	4	-	[+]	2
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, Pierre DELAPLACE, 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, Gauthier LIGOT, Benoît MERCATORIS	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> - Lelania SPERRAZZA - [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							

Chemistry and bio-industries

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
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CHIM9269-2	<i>Catalysis</i> - MarieLaure FAUCONNIER - [2h AUTR]	B0	Q2	6	12	[+]	2
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CHIM9242-4	<i>Fundamentals of quantitative analytical chemistry</i> - Giorgia PURCARO	B0	Q2	16	32	-	4
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ALIM0013-2	<i>Techniques for preparing and preserving foods</i>	B0	Q2				2
	- <i>General concepts</i> - Christophe BLECKER		21	-	-		
	- <i>In-depth study for bioengineers</i> - Christophe BLECKER		3	-	-		

Prerequisite :

BIAA0002-1 - Technologie agricole et alimentaire

Optional activity (B0 : 5Cr)

RSTG0012-1	<i>Additional internship</i> - Pierre DELAPLACE, Pierre DELAPLACE	B0	TA	-	-	-	5
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