

Block view of the study programme

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Block 1

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

Periods 1 and 2

CHIM1.10 Multivaried analysis

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

CHIM9246-2	<i>Chemical analysis : instrumental techniques</i> (english language) - Giorgia PURCARO - [5h SEM]	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]	Q1	10	6	[+]	2
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ALIM0015-1	<i>Food sanitary safety</i> - Mohamed AYADI - [2h SEM]	Q1	16	6	[+]	2
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ALIM0017-1	<i>Agro-food engineering procedures</i> - Sabine DANTHINE, Nicolas JACQUET	Q1	24	24	-	4
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CHIM1.13 Applied genoproteomics

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

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

ALIM0010-3	<i>Food, human nutrition and dietetics</i> (english language) - Jérôme BINDELLE Corequisite : LANG2954-1 - Pratique de l'anglais scientifique de bioingénieur (CHIB) (niveau B2+)	Q1	18	-	-	2
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Periods 3 and 4

CHIM1.30 Core curriculum Q2

MANA0004-1	<i>Portfolio (Master)</i> - Yves BECKERS, Hugues CLAESSENS, Gilles COLINET, Pierre DELAPLACE, Dorothee GOFFIN - [24h AUTR]	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]	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</i> (english language) - Frank DELVIGNE	Q2	24	18	-	4
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CHIM9335-1	<i>Downstream processing operations</i> - Patrick FICKERS	Q2	20	4	-	2
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CHIM9336-1	<i>Applied microbial ecology</i> (english language) - Marc ONGENA	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]	Q2	6	12	[+]	2
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INGE0002-1	<i>Refrigeration and drying</i> - Nicolas JACQUET, Paul MALUMBA KAMBA	Q2	18	6	-	2
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CHIM1.33 Food industry technologies

ALIM0012-1	<i>Technology of fats</i> - Sabine DANTHINE - [3h FT]	Q2	18	30	[+]	4
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Period 3
CHIM1.34 Food engineering

ALIM0007-1	<i>Physical chemistry of formulations</i> - Christophe BLECKER	Q2	16	8	-	2
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ALIM0005-1	<i>Food formulations engineering</i> - Christophe BLECKER	Q2	16	8	-	2
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CHIM1.35 Practical chemistry of natural substances

CHIM9245-1	<i>Advanced chromatographic techniques</i> (english language) - Giorgia PURCARO	Q2	15	3	-	2
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Corequisite :

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

CHIM9246-2 - Chemical analysis : instrumental techniques

CHIM9254-1	<i>Practice of natural product chemistry</i> (english language) - Manon GENVA, Aurore RICHEL	Q2	3	35	-	4
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Corequisite :

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

CHIM1.36 Immunology

CHIM9321-1	<i>Immunology</i> - Bénédicte MACHIELS	Q2	27	-	-	3
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Optional activities

RSTG0011-1	<i>Additional internship</i> - Pierre DELAPLACE	TA	-	-	-	5
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HULG9547-1	<i>French course for IN mobility students (S1)</i> - N...	Q1	-	-	-	3
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HULG9548-1	<i>French course for IN mobility students (S2)</i> - N...	Q2	-	-	-	3
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HULG9546-1	<i>Erasmus: integration weeks</i> - N...	Q1	-	-	-	3
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Block 2

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
Period 4
AGRO2.30 Final work and internship

RTFE2008-1	<i>Thesis in chemistry and bio-industries</i> - Giorgia PURCARO	Q2	-	-	-	24
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RSTG0002-1	<i>Internship and professional relations</i> - Catherine COLAUX, Thomas DOGOT, Patrick FICKERS	TA	12	-	-	8
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CHIM2.10 Research project and entrepreneurship

CHIM9324-1	<i>Research projects or entrepreneurship</i> - Philippe JACQUES - [8h AUTR]	Q1	2	2	[+]	1
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Optional activity

INFO9013-1	<i>Multivariate analysis 3: Data mining et Machine Learning: advanced</i> (english language) - Yves BROSTAU, David COLIGNON, Benoît MERCATORIS, Hélène SOYEURT	Q2	12	28	-	4
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Notice : INFO8008-2: prerequisite for the course INFO9013-1

Focus optional courses
Period 1 and 2

Choice n°1:

Choose one of the following modules :

CHIM2.11 Food supplements

Choose courses totalling 7 ECTS from the following :

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

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

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]	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 FAUCCONNIER, Manon GENVA, Loïc QUINTON, Aurore RICHEL	Q1	4	36	-	6
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Choice n°2:

Choose one of the following modules :

CHIM2.14 Microbial biotechnology - applications

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

Choose courses totalling 9 ECTS from the following :

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

[...] Possibilité de choisir entre 2 et 9 crédits parmi la liste des cours de remplacement

Choice n°3:

Choose one of the following modules :

CHIM2.16 Chemical contaminants analysis and risks of explosions

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

CHIM2.17 Multivaried analysis

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

Notice : can only be chosen once in the curriculum

Choice no. 4:

Choose one of the following modules :
CHIM2.18 Chemistry of bioenergy production

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

CHIM2.19 Applied immunology

CHIM9325-1 *Applied immunology* - Magali DELEU, Malik HAMAÏDIA, Marc ONGENA, Sandra ORMENESE, Luc WILLEMS Q1 12 24 - 4

CHIM2.20 Machine learning

INFO8008-2 *Multivariate analysis 2: data mining et machine learning* (english language) Q1 4
 - *Introduction* - Yves BROSTAU, Juan Antonio FERNANDEZ PIERNA, H  l  ne SOYEURT 9 18 -
 - *In-depth study* - Yves BROSTAU, Juan Antonio FERNANDEZ PIERNA, H  l  ne SOYEURT 3 6 -

Notice : can only be chosen once in the curriculum

Choose a language module from :
All year round
CHIM 2.31 English

LANG2955-2 *Specialised English for chemistry and bio-industries (level C1 - Presentation)* - Estelle MAYARD, Lelania SPERRAZZA - [36h AUTR] TA - 12 [+] 4

CHIM 2.32 Dutch

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

CHIM 2.33 Spanish

LANG9915-1 *Spanish - beginners* - Val  rie COYETTE TA 18 18 - 4

Bloc d'am  nagement du programme de l'ann  e
Bridging courses Master in chemistry and bio-industries
Compulsory courses
Common core courses

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

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

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

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

Corequisite :

STAT2004-1 - Statistique appliqu  e : 1  re partie

PSYC5897-3 *Team, organization and change* - Daniel FAULX, Tiber MANFREDINI, Elise SEGHERS - [44h SEM] TA 4 - [+] 2

Corequisite :

MANA0003-1 - Portfolio (Bachelier)

GEST3773-1 - Gestion de la qualit  

GEST3028-2 - Comptabilit   et gestion des entreprises

MANA0003-1 *Portfolio (Bachelor)* - Yves BECKERS, Hugues CLAESSENS, TA - - [+] 2

OLINET, Pierre DELAPLACE, Dorothée GOFFIN - [24h AUTR]

Corequisite :

PSYC5897-3 - Equipe, organisation & changement

RSTG0008-1	<i>Internship (Bachelor)</i> - Hélène SOYEURT - [18h AUTR]	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	Q1	27	9	-	3
BIOL2013-2	<i>General microbiology, Introduction</i> - Patrick FICKERS, Philippe JACQUES	Q1	16	8	-	2
ENVT2044-1	<i>General ecology</i> - Grégory MAHY, Arnaud MONTY	Q1	24	-	-	2
INFO2038-1	<i>Computer science and algorithmic</i> - Hélène SOYEURT	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	Q1	24	24	-	4
PHYS3036-1	<i>Environmental physics</i> - Bernard LONGDOZ	Q1	18	18	-	3
LANG2966-2	<i>English language: level 3</i> - Lelania SPERRAZZA - [48h E-Lrng]	TA	-	24	[+]	4
INGE0008-1	<i>Multidisciplinary experimental project</i> - Yves BROSTAUX, Pierre DELAPLACE, Sébastien MASSART, Benoît MERCATORIS, Jacques MIGNON, Arnaud MONTY - [60h AUTR]	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	Q2	24	-	-	2
BIOL2015-3	<i>Molecular biology</i> - Patrick FICKERS	Q2	24	-	-	2
	Corequisite :					
	BIOL2016-3 - Génétique générale					
BIOL2016-3	<i>General genetics</i> - Nicolas GENGLER, Ludivine LASSOIS	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	Q2	24	24	-	4
CHIM9269-2	<i>Catalysis</i> - MarieLaure FAUCONNIER - [2h AUTR]	Q2	6	12	[+]	2
CHIM9242-4	<i>Fundamentals of quantitative analytical chemistry</i> - Giorgia PURCARO	Q2	16	32	-	4
ALIM0013-2	<i>Techniques for preparing and preserving foods</i>	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

RSTG0012-1	<i>Additional internship</i> - Pierre DELAPLACE	TA	-	-	-	5
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Cours de remplacement :

ENVT3129-1	<i>Evaluating sustainability</i> - Andrea DI MARIA - [2h SEM]	Q2	12	16	[+]	3
ENVT3050-1	<i>Quantification of ecosystem services</i> - Marc DUFRÈNE - [6h AUTR]	Q1	9	5	[+]	2
BIOD0001-3	<i>Biodiversity management</i> - Arnaud MONTY - [6h SEM]	Q1	18	-	[+]	2

VEGE0037-1	<i>Innovative system of plant production</i> - <i>Urban agriculture</i> - Haïssam JIJAKLI - <i>Developmental physiology applied to plant productions</i> - Pierre DELAPLACE - [6h FT] - <i>Physical parameters control of plant productions in controlled conditions</i> - Vincent LEEMANS	Q2	13	13	-	6
			12	-	[+]	
			9	-	-	
VEGE0028-1	<i>Methods for managing plant health</i> - Frédéric FRANCIS, Olivier GUELTON, Eric HAUBRUGE, François HENRIET, Haïssam JIJAKLI, Sébastien MASSART, François VERHEGGEN	Q2	42	15	-	6