

Block view of the study programme

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Block 1

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.

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 - [6h AUTR]	Q1	18	-	[+]	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, Aurore DEGRÉ, Dorothée GOFFIN - [24h AUTR]	TA	-	-	[+]	2
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LANG2954-1	<i>Practice of Scientific English for bioengineers (CHIB) (level B2+)</i> - Sophie DEPOTERRE, Estelle MAYARD, Lelania SPERRAZZA, Fiona THEWISSEN - [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

CHIM0717-1	<i>Microbial processes and interactions</i> (english language) - Frank DELVIGNE, Patrick FICKERS, Philippe JACQUES, Marc ONGENA, JeanClaude TWIZERE - [9h AUTR]	Q2	57	18	[+]	8
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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 *Technology of fats* - Sabine DANTHINE - [3h FT] Q2 18 30 [+] 4

Period 3

CHIM1.34 Food engineering

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

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

CHIM1.35 Practical chemistry of natural substances

CHIM9245-1 *Advanced chromatographic techniques* (english language) - Giorgia PURCARO 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 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 Q2 27 - - 3

Optional activities

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

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

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

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

Block 2

Focus optional courses

Period 1 and 2

Choice n°1:

Choose one module from :

CHIM2.11 Food supplements

GBLX0058-1 *Complement of food formulations engineering and sensory analysis* - Christophe BLECKER Q1 12 6 - 2

GBLX0059-2 *Logistics in food industry* - Mohamed AYADI - [3h FT, 4h SEM] Q1 9 6 [+] 2

GBLX0060-2 *Microbial ecology of water and wastewater* (english language) - Frank DELVIGNE - [2h SEM] Q1 7 9 [+] 2

CHIM2.12 From gene to protein

CHIM0716-1 *From gene to protein* - Magali DELEU, Patrick FICKERS, Sébastien MASSART, Martine SCHROYEN, Luc WILLEMS - [12h AUTR] Q1 12 24 [+] 6

CHIM2.24 Extraction, purification, characterization and valuation of biosourced molecules

CHIM0722-1 *Extraction, purification, characterization and valorization of biosourced molecules* (english language) - Christian DAMBLON, MarieLaure FAUCONNIER, Manon GENVA, Loïc QUINTON, Aurore RICHEL Q1 4 36 - 6

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

Choice n°2:

Choose one module from :

CHIM2.14 Microbial biotechnology - applications

CHIM0719-1 *Microbial biotechnology - applications* (english language) - Frank DELVIGNE, Patrick FICKERS, Philippe JACQUES, Marc ONGENA - [96h Proj.] Q1 2 - [+] 9

CHIM2.15 Food Science

ALIM0006-1 *Food science* - Christophe BLECKER, Sabine DANTHINE - [6h AUTR] Q1 32 32 [+] 7

ALIM0018-1 *Food analysis* (english language) - Georgia PURCARO 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:

CHIM2.16 Chemical contaminants analysis and risks of explosions

CHIM0720-1 *Analysis of chemical contaminants* (english language) - Georgia PURCARO - [2h AUTR] Q1 - 16 [+] 2

CHIM0692-1 *Risks of using phytopharmaceutical products and biocides* - Jeroen MEERSMANS - [6h SEM] Q1 12 - [+] 2

CHIM2.17 Multivaried analysis

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

Notice : can only be chosen once in the curriculum

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

Choice no. 4:

Choose one module for 4 credits:

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* - Malik HAMAÏDIA, Marc ONGENA, Luc WILLEMS Q1 12 24 - 4

CHIM2.20 Machine learning

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

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 :

Periods 3 and 4

CHIM 2.31 English

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

All year round

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* - Valérie COYETTE TA 18 18 - 4

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Core curriculum compulsory courses

Period 4

AGRO2.30 Final work and internship

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

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

CHIM2.10 Research project and entrepreneurship

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

Optional activity

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

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

Bloc d'aménagement du programme de l'année

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, Sébastien MASSART - [6h AUTR] Q1 18 - [+] 2

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

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

Corequisite :

STAT2004-1 - Statistique appliquée : 1ère partie

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

Corequisite :

MANA0003-1 - Portfolio (Bachelier)

GEST3773-1 - Gestion de la qualité

GEST3028-2 - Comptabilité et gestion des entreprises

MANA0003-1 *Portfolio (Bachelor)* - Yves BECKERS, Hugues CLAESSENS, Gilles COLINET, Aurore DEGRÉ, Dorothée GOFFIN - [24h AUTR] TA - - [+] 2

Corequisite :

PSYC5897-3 - Equipe, organisation & changement

RSTG0008-1 *Internship (Bachelor)* - 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, Benoît MERCATORIS - Suppl : Gauthier LIGOT	Q1	24	24	-	4
PHYS3036-1	<i>Environmental physics</i> - Bernard LONGDOZ	Q1	18	18	-	3
LANG2966-2	<i>English language: level 3</i> - Sophie DEPOTERRE, Estelle MAYARD, Lelania SPERRAZZA, Fiona THEWISSEN - [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						

Subject : Chemistry and bioindustry

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 of food preservation</i> - Christophe BLECKER	Q2	24	-	-	2
Prerequisite :						
BIAA0002-1 - Technologie agricole et alimentaire						

Optional activity

RSTG0012-1	<i>Additional internship</i> - Aurore DEGRÉ	TA	-	-	-	5
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Possibility to choose between 2 and 6 credits among the following courses, replacing the B2 elective courses:

ENVT3129-1	<i>Evaluating sustainability</i> - Andrea DI MARIA, Angélique LÉONARD - [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>	Q2				6
	- <i>Urban agriculture</i> - Haissam JIJAKLI		13	13	-	
	- <i>Developmental physiology applied to plant productions</i> - Pierre DELAPLACE		12	-	[+]	
	- [6h FT]					
	- <i>Physical parameters control of plant productions in controlled conditions</i> -		9	-	-	

Vincent LEEMANS

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