

Cycle view of the study programme

B1 Or Th Pr Au Cr

Focus compulsory courses (B1 : 30Cr)

Periods 1 and 2

AGRO1.11 Rural economics and European and international policy.

ECON0942-1 *Rural economics and farm business management* - Philippe BURNY, Thomas DOGOT - [8h FT] B1 Q1 25 15 [+] 5

GEST3019-2 *Food policies and strategies* (english language) - Hossein AZADI - [3h FT] B1 Q1 9 15 [+] 3

Corequisite :

LANG2952-1 - Pratique de l'anglais scientifique de bioingénieur (AGRO) (niveau B2+)

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

AGRO1.12 General crop husbandry

VEGE0041-1 *Pest biology and ecology* B1 Q1 34 6 [+] 5

- *Introduction* - Frédéric FRANCIS, François HENRIET, Sébastien MASSART - [8h AUTR]

- *Depth notions* - Frédéric FRANCIS, François HENRIET, Sébastien MASSART - [10h AUTR]

Corequisite :

LANG2952-1 - Pratique de l'anglais scientifique de bioingénieur (AGRO) (niveau B2+)

VEGE0024-1 *General and applied phytotechnology in temperate and tropical settings* B1 Q1 39 4 [+] 5

- Nicolas DESOIGNIES, Benjamin DUMONT - [5h FT]

AGRO1.13 Livestock systems

ANIM0029-1 *Foundations and dynamics of livestock systems* - Yves BECKERS, Jérôme BINDELLE, Martine SCHROYEN B1 Q1 54 - - 6

ANIM0030-1 *Animal recording, breeding and reproduction in modern sustainable animal production system* (english language) - Nicolas GENGLER, Martine SCHROYEN - [4h FT] B1 Q1 22 10 [+] 4

Corequisite :

LANG2952-1 - Pratique de l'anglais scientifique de bioingénieur (AGRO) (niveau B2+)

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 (B1 : 12Cr, B2 : 38Cr)

Periods 3 and 4

AGRO1.30 Core curriculum Q2

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

LANG2952-1 *Practice of Scientific English for bioengineers (AGRO) (level B2+)* - Sophie DEPOTERRE, Estelle MAYARD, Lelania SPERRAZZA - Suppl : Fiona THEWISSEN - [36h AUTR] B1 TA - 12 [+] 4

Corequisite :

GEST3019-2 - Food policies and strategies

VEGE0041-1 - Biologie et écologie des bioagresseurs

INFO9028-1 *Data Sciences* - JeanFrançois BASTIN, Yves BROSTAUX, Nicolas GENGLER, Hélène SOYEURT - [12h Pr.] B1 Q2 6 - [+] 2

AGRO0026-1 *Integrated production systems* - Jérôme BINDELLE, Benjamin DUMONT, Haïssam JIAKLI B1 Q2 8 16 - 2

AGRO0027-1 *Excursion week* - Caroline DE CLERCK, Pierre DELAPLACE, Frédéric FRANCIS, Nicolas GENGLER, Martine SCHROYEN - [8h Pr., 32h] B1 Q2 - - [+] 2

FT]

Periods 1 and 2

AGRO2.10 Group project

AGRO0020-1	<i>Group project</i> - Yves BECKERS - [36h AUTR]	B2	Q1	-	-	[+]	4
GEST3020-1	<i>Conceiving and economics assessment of projects</i> (english language) - Hossein AZADI - [9h SEM]	B2	Q1	9	-	[+]	2

Periods 3 and 4

AGRO2.31 Final dissertation, training programme and English

RTFE2007-1	<i>Thesis in agronomic sciences</i> - Yves BECKERS	B2	Q2	-	-	-	24
RSTG0001-1	<i>Internship and professional relations</i> - Catherine COLAUX, Thomas DOGOT, Hélène SOYEURT	B2	TA	12	-	-	8

Common core courses (B1 : 18Cr, B2 : 22Cr)

Choose one module from the courses with options no. 1 (period 3): (B1 : 1Nbr)

AGRO1.32 Livestock systems engineering (B1 : 6Cr)

ANIM0017-1	<i>Biotechnology aspects of livestock systems</i> - Yves BECKERS, Jérôme BINDELLE, Martine SCHROYEN	B1	Q2	18	-	-	2
ANIM0025-1	<i>Feeding dairy cow</i> - Yves BECKERS	B1	Q2	9	9	-	2
ANIM0024-1	<i>Breeding system for agroecology</i> - Yves BECKERS, Jérôme BINDELLE - [3h FT]	B1	Q2	9	6	[+]	2

AGRO 1.33 Agricultural policy, sociology and rural legislation (B1 : 6Cr)

SOCI2234-1	<i>Construction of public policies</i> - Laurence LAMBERT	B1	Q2	18	-	-	2
ECON2247-1	<i>Agricultural policy</i> - Philippe BURNY - [4h SEM]	B1	Q2	9	5	[+]	2
DROI0967-1	<i>Rural law</i> - Gaëtan GOISSE	B1	Q2	18	-	-	2

AGRO 1.34 Systemic approach to plant production in temperate regions (B1 : 6Cr)

VEGE0027-1	<i>Systematic approach to plant production in temperate regions</i> - <i>Plant sciences and different field crop and production species</i> - Benjamin DUMONT - [6h Ex.] - <i>Implementation of technical pathways under real conditions</i> - Benjamin DUMONT - [3h FT] - <i>Evaluation and optimisation of production systems</i> - Benjamin DUMONT	B1	Q2	28	-	[+]	6
	Corequisite : VEGE0024-1 - Phytotechnie générale et appliquée en milieux tempérés et tropicaux						

Choose one module from the courses with options no. 2 (period 3): (B1 : 1Nbr)

AGRO 1.35 Biochemistry and animal pathology (B1 : 6Cr)

ANIM0012-1	<i>Farm animal immunology and pathology</i> (english language) - Martine SCHROYEN	B1	Q2	18	-	-	2
	Corequisite : LANG2952-1 - Pratique de l'anglais scientifique de bioingénieur (AGRO) (niveau B2+)						
ANIM0005-1	<i>Functional biochemistry in health and disease</i> (english language) - Martine SCHROYEN	B1	Q2	9	9	-	2
	Corequisite : LANG2952-1 - Pratique de l'anglais scientifique de bioingénieur (AGRO) (niveau B2+)						
ANIM0011-3	<i>Welfare and ethics in animal productions</i> (english language) - Nicolas GENGLER - [3h FT]	B1	Q2	9	6	[+]	2
	Corequisite :						

LANG2952-1 - Pratique de l'anglais scientifique de bioingénieur (AGRO) (niveau B2+)

AGRO 1.36 Economics of development (B1 : 6Cr)

ECON2246-2 *Economics of developing countries* (english language) - Hossein AZADI - [16h SEM] B1 Q2 8 - [+] 2

Corequisite :

LANG2952-1 - Pratique de l'anglais scientifique de bioingénieur (AGRO) (niveau B2+)

ECON2254-2 *Tropical markets* (english language) - Hossein AZADI B1 Q2 9 9 - 2

Corequisite :

LANG2952-1 - Pratique de l'anglais scientifique de bioingénieur (AGRO) (niveau B2+)

ECON2253-2 *Economics of development Seminar* - Hossein AZADI, Thomas DOGOT - [18h SEM] B1 Q2 - - [+] 2

AGRO 1.37 Innovative systems of plant production (B1 : 6Cr)

VEGE0037-1 *Innovative system of plant production* B1 Q2 6
 - *Urban agriculture* - Haissam 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 - -

Choose 1 optional module no. 3 (period 4) : (B1 : 1Nbr)

AGRO 1.43 Economic decision support (B1 : 6Cr)

ECON2299-1 *Assistance in economic decision-making* - Yves BROSTAUX, Catherine CHARLES, Thomas DOGOT - [6h AUTR] B1 Q2 30 24 [+] 6

AGRO1.44 Bromatology and the cultivation of animal fodder (B1 : 6Cr)

ANIM0018-1 *Bromatology and grazing management* - Yves BECKERS, Jérôme BINDELLE - [7h FT] B1 Q2 37 13 [+] 6

AGRO 1.45 Plant protection methods (B1 : 6Cr)

VEGE0028-1 *Methods for managing plant health* - Frédéric FRANCIS, Olivier GUELTON, Eric HAUBRUGE, François HENRIET, Haissam JIJAKLI, Sébastien MASSART, François VERHEGGEN B1 Q2 42 15 - 6

Periods 1 and 2

Choose 3 modules from the 4 modules options : (B2 : 18Cr)

Option 1 of modules:

AGRO 2.11 Physiology, plant breeding and multiplication of cultivated plants

VEGE0026-1 *Physiology, plant breeding and multiplication of cultivated plants* B2 Q1 6
 - *Physiology* - Pierre DELAPLACE 7 5 -
 - *Plant breeding* 9 5 -
 - *Diversity of plant genetic resources* - [7h FT] 7 1 [+]
 - *Multiplication of cultivated plants* - [2h FT] 9 5 [+]

Prerequisite :

VEGE0041-1 - Biologie et écologie des bioagresseurs

VEGE0024-1 - Phytotechnie générale et appliquée en milieux tempérés et tropicaux

AGRO 2.12 Data mining & Machine learning

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

Prerequisite :

STAT1213-1 - Analyse multivariée 1 : exploration et structuration de données

INFO8009-1 *Bioinformatics* - Sébastien MASSART, Martine SCHROYEN B2 Q1 9 9 - 2

Module option 2 :

AGRO 2.13 Market and supply analysis

ECON2251-3	<i>Food value chains analysis, Introduction</i> (english language) - Hossein AZADI	B2	Q1	18	-	-	2
ECON2252-2	<i>Marketing and consumer market research</i> - Alain DECROP	B2	Q1	36	-	-	4

AGRO 2.14 Plant biotechnology

VEGE0032-1	<i>Plant biotechnology</i>	B2	Q1				6
	- <i>Molecular plant biotechnology</i> - Hervé VANDERSCHUREN			9	5	-	
	- <i>Exercise of plant biotechnology</i> - Hervé VANDERSCHUREN			-	14	-	
	- <i>Biology applied to pest prevention</i> - Frédéric FRANCIS			7	7	-	
	- <i>Biology applied to phytopathology</i> - Sébastien MASSART			3	12	-	

AGRO 2.15 Smart Farming

AGRO0023-1	<i>Smart farming</i> - JeanFrançois BASTIN, Jérôme BINDELLE, Benjamin DUMONT	B2	Q1	54	-	-	6
------------	--	----	----	----	---	---	---

Option 3 of modules:

AGRO 2.16 Applied economic analysis

ECON2298-3	<i>Transition and new economic models</i> - Kevin MARÉCHAL	B2	Q1	9	9	-	2
	Prerequisite : ECON0942-1 - Economie rurale et gestion des entreprises agricoles GEST3019-2 - Food policies and strategies STAT1213-1 - Analyse multivariée 1 : exploration et structuration de données						
ECON2250-1	<i>International economics</i> (english language) - Hossein AZADI - [12h AUTR]	B2	Q1	6	-	[+]	2
ECON2248-1	<i>Environmental economy</i> - Kevin MARÉCHAL	B2	Q1	18	-	-	2
	Prerequisite : ECON0942-1 - Economie rurale et gestion des entreprises agricoles GEST3019-2 - Food policies and strategies STAT1213-1 - Analyse multivariée 1 : exploration et structuration de données						

AGRO 2.17 Applied strategies for the integrated management of pests and weeds

VEGE0042-1	<i>Integrated and agroecological protection of crops</i> - Frédéric FRANCIS, Eric HAUBRUGE, François HENRIET, Haïssam JIJAKLI, Sébastien MASSART, Jeroen MEERSMANS, François VERHEGGEN	B2	Q1	29	28	-	6
------------	--	----	----	----	----	---	---

AGRO 2.18 Advanced animal genetics, genomics and biodiversity

ANIM0031-1	<i>Advanced animal genetics, genomics and biodiversity</i> (english language) - Nicolas GENGLER	B2	Q1	27	27	-	6
	Prerequisite : ANIM0030-1 - Animal recording, breeding and reproduction in modern sustainable animal production system ANIM0029-1 - Fondements et dynamiques des systèmes d'élevage						

Module option 4 :

AGRO 2.19 Applied rural socioeconomics

ECON2273-1	<i>Applied rural socioeconomics</i> - Yves BROSTAUX, Thomas DOGOT - [4h SEM]	B2	Q1	10	43	[+]	6
	Prerequisite : STAT1213-1 - Analyse multivariée 1 : exploration et structuration de données						

AGRO 2.20 Chemical, biological and environmental risks related to plant productions

VEGE0034-1	<i>Chemical, biological and environmental risks related to plant</i>	B2	Q1	24	33	-	6
------------	--	----	----	----	----	---	---

productions - Patrick DU JARDIN, Benjamin DUMONT ,
Jeroen MEERSMANS, François VERHEGGEN

Prerequisite :

VEGE0041-1 - Biologie et écologie des bioagresseurs

VEGE0024-1 - Phytotechnie générale et appliquée en milieux tempérés et tropicaux

AGRO 2.21 Feed & food

ANIM0019-1	<i>Current issues in breeding systems</i> - Yves BECKERS	B2	Q1	5	31	-	4
ALIM0010-3	<i>Food, human nutrition and dietetics</i> (english language) - Jérôme BINDELLE	B2	Q1	18	-	-	2

[...] 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]	B2	Q2	12	16	[+]	3
ENVT3050-1	<i>Quantification of ecosystem services</i> - Marc DUFRÈNE - [6h AUTR]	B2	Q1	9	5	[+]	2
BIOD0001-3	<i>Biodiversity management</i> - Arnaud MONTY - [6h SEM]	B2	Q1	18	-	[+]	2
CHIM9321-1	<i>Immunology</i> - Bénédicte MACHIELS	B2	Q2	27	-	-	3
ALIM0015-1	<i>Food sanitary safety</i> - Mohamed AYADI - [2h SEM]	B2	Q1	16	6	[+]	2
ALIM0013-2	<i>Techniques of food preservation</i> - Christophe BLECKER	B2	Q2	24	-	-	2
BIOL2015-3	<i>Molecular biology</i> - Patrick FICKERS	B2	Q2	24	-	-	2

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

Periods 3 and 4

AGRO 2.31 English language (B2 : 4Cr)

LANG2953-1	<i>Practice of specialized English for agricultural science (level C1 - Presentation)</i> - Sophie DEPOTERRE, Estelle MAYARD, Lelania SPERRAZZA - Suppl : Fiona THEWISSEN - [36h AUTR]	B2	TA	-	12	[+]	4
------------	--	----	----	---	----	-----	----------

Corequisite :
AGRO0020-1 - Projet de groupe

All year round

AGRO 2.32 Dutch language (B2 : 4Cr)

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

AGRO 2.33 Spanish language (B2 : 4Cr)

LANG9915-1	<i>Spanish - beginners</i> - Valérie COYETTE	B2	TA	18	18	-	4
------------	--	----	----	----	----	---	----------

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

RSTG0011-1	<i>Additional internship</i> - Aurore DEGRÉ	B1	TA	-	-	-	5
HULG9547-1	<i>French course for IN mobility students (S1)</i> - N...	B1	Q1	-	-	-	3
HULG9548-1	<i>French course for IN mobility students (S2)</i> - N...	B1	Q2	-	-	-	3
HULG9546-1	<i>Erasmus: integration weeks</i> - N...	B1	Q1	-	-	-	3
INFO9013-1	<i>Multivaried analysis 3: Data mining et Machine Learning: advanced</i> (english language) - Yves BROSTAUX, David COLIGNON, Benoît MERCATORIS, Hélène SOYEURT	B2	Q2	12	28	-	4

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

Bridging courses Master in agricultural bioengineering

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, Véronique JANS, Tiber MANFREDINI - [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, 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, 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, Lelania SPERRAZZA, Fiona THEWISSEN - Suppl : Ivan DOSEN - [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						

Course Agricultural Sciences

AGRO0001-1	<i>Basic principles of agriculture and agroecology</i> - Pierre DELAPLACE, Benjamin DUMONT - [4h FT]	B0	Q2	20	-	[+]	2
AGRO0002-1	<i>Fertilization and crop nutrition</i> - Caroline DE CLERCK, Patrick DU JARDIN, Benjamin DUMONT - [2h AUTR]	B0	Q2	18	4	[+]	2
	Corequisite :						

	BIOL2044-1 - Physiologie végétale AGRO0001-1 - Fondement d'agriculture et d'agroécologie								
AGRO0021-1	<i>Introduction to cultivation techniques and levers</i> - Benjamin DUMONT , Ludivine LASSOIS - Suppl : Nicolas DESOIGNIES - [4h AUTR] Corequisite : AGRO0001-1 - Fondement d'agriculture et d'agroécologie	B0	Q2	20	-	[+]			2
BIOL2015-3	<i>Molecular biology</i> - Patrick FICKERS Corequisite : BIOL2016-3 - Génétique générale	B0	Q2	24	-	-			2
BIOL2016-3	<i>General genetics</i> - Nicolas GENGLER, Ludivine LASSOIS Corequisite : BIOL2015-3 - Biologie moléculaire	B0	Q2	12	12	-			2
BIOL2018-1	<i>Animal nutrition</i> - Yves BECKERS	B0	Q2	24	-	-			2
SPRA0001-1	<i>Sustainable breeding and zoogenetic resources</i> - Nicolas GENGLER - [4h FT] Corequisite : BIOL2016-3 - Génétique générale	B0	Q2	20	-	[+]			2
BIOL2043-1	<i>Application of molecular biology and genetics</i> - Nicolas GENGLER, Martine SCHROYEN, Hervé VANDERSCHUREN, Luc WILLEMS Corequisite : BIOL2016-3 - Génétique générale	B0	Q2	-	24	-			2
GERE0043-1	<i>Foundations of soil quality</i> - Gilles COLINET, Caroline DE CLERCK, Aurore DEGRÉ	B0	Q2	18	6	-			2