

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 3 and 4

AGRO1.30 Core curriculum Q2

MANA0004-1	<i>Portfolio (Master)</i> - Yves BECKERS, Hugues CLAESSENS, Gilles COLINET, Pierre DELAPLACE, Dorothée GOFFIN - [24h AUTR]	TA	-	-	[+]	2
LANG2952-1	<i>Practice of Scientific English for bioengineers (AGRO) (level B2+)</i> - Estelle MAYARD, Lelania SPERRAZZA - [36h AUTR]	TA	-	12	[+]	4
Corequisite : GEST3019-2 - Food policies and strategies VEGE0046-1 - Biologie et écologie des bioagresseurs						
INFO9028-1	<i>Data Management</i> - JeanFrançois BASTIN, Yves BROSTAUX, Nicolas GENGLER, Hélène SOYEURT - [12h Pr.]	Q2	6	-	[+]	2
AGRO0026-1	<i>Integrated production systems</i> - Jérôme BINDELLE, Benjamin DUMONT, Haissam JIAKLI - Suppl : Jérôme BINDELLE	Q2	8	16	-	2
AGRO0027-1	<i>Excursion week</i> - Caroline DE CLERCK, Pierre DELAPLACE, Frédéric FRANCIS, Nicolas GENGLER, Martine SCHROYEN - [8h Pr., 32h FT]	Q2	-	-	[+]	2

Common core courses

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

AGRO1.32 Livestock systems engineering

ANIM0017-1	<i>Biotechnology aspects of livestock systems</i> - Yves BECKERS, Jérôme BINDELLE, Martine SCHROYEN	Q2	36	-	-	4
ANIM0024-1	<i>Breeding system for agroecology</i> - Yves BECKERS, Jérôme BINDELLE - [3h FT]	Q2	9	6	[+]	2

AGRO 1.33 Agricultural policy, sociology and rural legislation

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

AGRO 1.34 Systemic approach to plant production in temperate regions

VEGE0027-1	<i>Systemic approach to plant production in temperate regions</i> - Plant sciences and different field crop and production species - Benjamin DUMONT - Suppl : Christophe LACROIX - Implementation of technical pathways under real conditions - Benjamin DUMONT - Suppl : Christophe LACROIX - [3h FT] - Evaluation and optimisation of production systems - Benjamin DUMONT - Suppl : Christophe LACROIX	Q2	21	7	-	6
	Corequisite : VEGE0024-1 - Phytotechnie générale et appliquée en milieux tempérés et tropicaux		-	12	[+]	
			-	9	-	

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

AGRO 1.35 Biochemistry and animal pathology

ANIM0012-1	<i>Farm animal immunology and pathology (english language)</i> - Martine SCHROYEN	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	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]	Q2	9	6	[+] 2
	Corequisite : LANG2952-1 - Pratique de l'anglais scientifique de bioingénieur (AGRO) (niveau B2+)				

AGRO 1.36 Economics of development

ECON2246-2	<i>Economics of developing countries</i> (english language) - N... - [18h SEM]	Q2	9	-	[+] 3
	Corequisite : LANG2952-1 - Pratique de l'anglais scientifique de bioingénieur (AGRO) (niveau B2+)				
ECON2254-2	<i>Economics of tropical markets</i> (english language) - N... - [9h SEM]	Q2	9	9	[+] 3
	Corequisite : LANG2952-1 - Pratique de l'anglais scientifique de bioingénieur (AGRO) (niveau B2+)				

AGRO 1.37 Innovative systems of plant production

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

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

AGRO 1.43 Economic decision support

ECON2299-1	<i>Assistance in economic decision-making</i> - Yves BROSTAUX, Catherine CHARLES, Thomas DOGOT - [6h AUTR]	Q2	30	24	[+] 6
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AGRO1.44 Bromatology and the cultivation of animal fodder

ANIM0018-1	<i>Bromatology and grazing management</i> - Yves BECKERS, Jérôme BINDELLE - [7h FT]	Q2	37	13	[+] 6
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AGRO 1.45 Plant protection methods

VEGE0028-1	<i>Methods for managing plant health</i> - Frédéric FRANCIS, Olivier GUELTON, Eric HAUBRUGE, Haissam JIJAKLI, Sébastien MASSART, François VERHEGGEN	Q2	42	15	- 6
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Optional activities

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

Focus compulsory courses

Periods 1 and 2

AGRO1.11 Rural economics and European and international policy.

ECON0942-1	<i>Rural economics and farm business management</i> - Philippe BURNY, Thomas DOGOT - [8h FT]	Q1	25	15	[+] 5
GEST3019-2	<i>Food policies and strategies</i> (english language) - N... - Suppl : Arno FAIVRE - [3h FT]	Q1	9	15	[+] 3
	Corequisite :				

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

STAT1213-1	<i>Multivariate analysis 1: data exploration and structuring</i> - Yves BROSTAUX	Q1	9	9	-	2
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AGRO1.12 General crop husbandry

VEGE0046-1	<i>Biology and ecology of bioagressors</i> - Frédéric FRANCIS, François HENRIET, Sébastien MASSART - [9h AUTR]	Q1	32	13	[+]	5
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Corequisite :

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

VEGE0024-1	<i>General and applied phytotechnology in temperate and tropical settings</i> - Nicolas DESOIGNIES, Benjamin DUMONT - Suppl : Christophe LACROIX - [3h FT]	Q1	39	6	[+]	5
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AGRO1.13 Livestock systems

ANIM0029-1	<i>Foundations and dynamics of livestock systems</i> - Yves BECKERS, Jérôme BINDELLE, Martine SCHROYEN	Q1	54	-	-	6
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ANIM0030-1	<i>Animal recording, breeding and reproduction in modern sustainable animal production system</i> (english language) - Nicolas GENGLER, Martine SCHROYEN - [4h FT]	Q1	22	10	[+]	4
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Corequisite :

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

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

Periods 1 and 2

AGRO2.10 Group project

AGRO0020-1	<i>Group project</i> - Mohamed AYADI, Jérôme BINDELLE, Fanny BOERAEVE, Thomas DOGOT, Patrick DU JARDIN, Benjamin DUMONT, Frédéric FRANCIS, Haissam JIJAKLI, Kevin MARÉCHAL, Sébastien MASSART - Suppl : Christophe LACROIX - [63h AUTR]	Q1	-	-	[+]	7
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GEST3020-1	<i>Conceiving and economics assessment of projects</i> (english language) - Andrea DI MARIA, N... - Suppl : Florence LANZI - [9h SEM]	Q1	9	-	[+]	2
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Periods 3 and 4

AGRO2.31 Final dissertation, work placement and language

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

Periods 1 and 2

Choose 3 modules from the 4 modules options :

Option 1 of modules:

AGRO 2.11 Physiology, plant breeding and multiplication of cultivated plants

VEGE0047-1	(pas organisé en 2025-2026) <i>Physiology</i> - Pierre DELAPLACE	Q1	4	5	-	1
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Prerequisite :

VEGE0046-1 - Biologie et écologie des bioagresseurs

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

VEGE0048-1	(pas organisé en 2025-2026) <i>Improving and multiplying cultivated plants</i>	Q1	-	-	-	4
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Prerequisite :

VEGE0046-1 - 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 et machine learning, Introduction (english language)* - Yves BROSTAU, Juan Antonio FERNANDEZ PIerna, Hélène SOYEURT

Prerequisite :

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

INFO8009-1 *Bioinformatics* - Sébastien MASSART, Martine SCHROYEN

AGRO 2.13 Tropical agroecology

VEGE0049-1 *Tropical agroecology* - Ludivine LASSOIS - Suppl : Nicolas DESOIGNIES

Module option 2 :

AGRO 2.14 Market and supply analysis

ECON2251-3 *Food value chains analysis: Insights and case studies (english language)* - N... - Suppl : Arno FAIVRE

ECON2252-2 *Marketing and consumer market research* - Alain DECROP

AGRO 2.15 Plant biotechnology

VEGE0032-1 *Plant biotechnology* - *Molecular plant biotechnology* - Hervé VANDERSCHUREN
- *Plant biotechnology and plant production* - Frédéric FRANCIS, Sébastien MASSART

AGRO 2.16 Smart Farming

AGRO0023-1 *Smart farming* - JeanFrançois BASTIN, Jérôme BINDELLE, Benjamin DUMONT

Option 3 of modules:

AGRO 2.17 Applied economic analysis

ECON2298-3 *Transition and new economic models (Service Learning)* - Kevin MARÉCHAL

ECON2248-1 *Environmental economy* - Kevin MARÉCHAL

AGRO 2.18 Applied strategies for the integrated management of pests and weeds

VEGE0042-1 *Integrated and agroecological protection of crops* - Frédéric FRANCIS, François HENRIET, Haissam JIJAKLI, Sébastien MASSART, Jeroen MEERSMANS, François VERHEGGEN

AGRO 2.19 Advanced animal genetics, genomics and biodiversity

ANIM0031-1 *Advanced animal genetics, genomics and biodiversity (english language)* - Nicolas GENGLER

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 2.20 Applied rural socioeconomics

ECON2273-1 *Applied rural socioeconomics* - Yves BROSTAU, Thomas DOGOT - [3h SEM]

Prerequisite :

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

AGRO 2.21 Chemical, biological and environmental risks related to plant productions

VEGE0034-1	<i>Chemical, biological and environmental risks related to plant productions</i> - Patrick DU JARDIN, Benjamin DUMONT, Jeroen MEERSMANS, François VERHEGGEN	Q1	20	28	-	5
Prerequisite :						
VEGE0046-1 - Biologie et écologie des bioagresseurs						
VEGE0024-1 - Phytotechnie générale et appliquée en milieux tempérés et tropicaux						

AGRO 2.22 Feed & food

ANIM0025-1	<i>Feeding dairy cow</i> - Yves BECKERS	Q1	9	18	-	3
ALIM0010-3	<i>Food, human nutrition and dietetics</i> (english language) - Jérôme BINDELLE	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 - [2h SEM]	Q2	12	16	[+]	3
ENVT3050-1	<i>Quantification of ecosystem services</i> - Marc DUFRÊNE - [6h AUTR]	Q1	9	5	[+]	2
BIOD0001-3	<i>Biodiversity management</i> - Arnaud MONTY - [6h SEM]	Q1	18	-	[+]	2
CHIM9321-1	<i>Immunology</i> - Bénédicte MACHIELS	Q2	27	-	-	3
ALIM0015-1	<i>Food sanitary safety</i> - Mohamed AYADI - [2h SEM]	Q1	16	6	[+]	2
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	-	-	
BIOL2015-3	<i>Molecular biology</i> - Patrick FICKERS	Q2	24	-	-	2

Choose one language module from:

All year round

AGRO 2.31 English language

LANG2953-1	<i>Practice of specialized English for agricultural science (level C1 - Presentation)</i> - Estelle MAYARD, Lelania SPERRAZZA - [36h AUTR]	TA	-	12	[+]	4
Corequisite :						
AGRO0020-1 - Projet de groupe						

AGRO 2.32 Dutch language

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

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

INFO9013-1	<i>Multivaried analysis 3: Data mining et Machine Learning: advanced</i> (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 agricultural bioengineering

Compulsory courses

Common core courses

GEST3028-2	<i>Accounting and management</i> - Thomas DOGOT	Q1	22	26	-	4
GEST3773-1	<i>Management of quality</i> - Mohamed AYADI, Sébastien MASSART - [6h AUTR]	Q1	18	-	[+]	2
STAT2004-1	<i>Applied statistics : First part</i> - Yves BROSTAUX	Q1	12	12	-	2
STAT2005-1	<i>Applied statistic : Second part</i> - Yves BROSTAUX Corequisite : STAT2004-1 - Statistique appliquée : 1ère partie	Q2	12	12	-	2
PSYC5897-3	<i>Team, organization and change</i> - Daniel FAULX, Tiber MANFREDINI, Elise SEGHERS - [44h SEM] Corequisite : MANA0003-1 - Portfolio (Bachelier) GEST3773-1 - Gestion de la qualité GEST3028-2 - Comptabilité et gestion des entreprises	TA	4	-	[+]	2
MANA0003-1	<i>Portfolio (Bachelor)</i> - Yves BECKERS, Hugues CLAESSENS, Gilles COLINET, Pierre DELAPLACE, Dorothée GOFFIN - [24h AUTR] Corequisite : PSYC5897-3 - Equipe, organisation & changement	TA	-	-	[+]	2
RSTG0008-1	<i>Internship (Bachelor)</i> - Hélène SOYEURT - [18h AUTR] Corequisite : PSYC5897-3 - Equipe, organisation & changement GEST3028-2 - Comptabilité et gestion des entreprises GEST3773-1 - Gestion de la qualité	TA	6	-	[+]	2
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] 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	TA	6	6	[+]	6

Course Agricultural Sciences

AGRO0001-1	<i>Basic principles of agriculture and agroecology</i> - Pierre DELAPLACE, Benjamin DUMONT - Suppl : Christophe LACROIX - [4h Ex.]	Q2	16	4	[+]	2
AGRO0002-1	<i>Fertilization and crop nutrition</i> - Caroline DE CLERCK, Patrick DU JARDIN, Benjamin DUMONT - Suppl : Christophe LACROIX - [4h AUTR] Corequisite : AGRO0001-1 - Fondement d'agriculture et d'agroécologie BIOL2044-1 - Physiologie végétale	Q2	16	4	[+]	2
AGRO0021-1	<i>Introduction to cultivation techniques and levers</i> - Benjamin DUMONT, Ludivine LASSOIS - Suppl : Nicolas DESOIGNIES, Christophe LACROIX - [4h AUTR] Corequisite :	Q2	18	2	[+]	2

	AGRO0001-1 - Fondement d'agriculture et d'agroécologie					
BIOL2015-3	<i>Molecular biology</i> - Patrick FICKERS Corequisite : BIOL2016-3 - Génétique générale	Q2	24	-	-	2
BIOL2016-3	<i>General genetics</i> - Nicolas GENGLER, Ludivine LASSOIS Corequisite : BIOL2015-3 - Biologie moléculaire	Q2	12	12	-	2
BIOL2018-1	<i>Animal nutrition</i> - Yves BECKERS	Q2	24	-	-	2
SPRA0001-1	<i>Sustainable breeding and zoogenetic resources</i> - Nicolas GENGLER - [4h FT] Corequisite : BIOL2016-3 - Génétique générale	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	Q2	-	24	-	2
GERE0043-1	<i>Foundations of soil quality</i> - Gilles COLINET, Caroline DE CLERCK, Aurore DEGRÉ	Q2	18	6	-	2