

Cycle view of the study programme

B1 Or Th Pr Au Cr

Focus compulsory courses (B1 : 20Cr)

Period 1 and 2

STE1.10 Core curriculum 1

STAT1213-1	<i>Multivariate analysis 1: data exploration and structuring</i> - Yves BROSTAUX	B1	Q1	9	9	-	2
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STE1.10 Core curriculum 2

MANA0004-1	<i>Portfolio (Master)</i> - Yves BECKERS, Hugues CLAESSENS, Gilles COLINET, Aurore DEGRÉ, Dorothée GOFFIN - [24h AUTR]	B1	TA	-	-	[+]	2
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LANG2956-1	<i>Practice of Scientific English for bioengineers (STE) (level B2+)</i> - Sophie DEPOTERRE, Estelle MAYARD, Lelania SPERRAZZA, Fiona THEWISSEN - [36h AUTR]	B1	TA	-	12	[+]	4
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Corequisite :

GEOP0003-2 - Genèse, analyse et fonctionnement des sols
GERE0037-1 - Modélisation de la dynamique des biosystèmes

Period 3

STE1.10 Core curriculum 3

GERE0040-1	<i>Modelling soil transfers</i> - Aurore DEGRÉ - Suppl : Benjamin GUILLAUME	B1	Q2	6	12	-	2
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GERE0019-1	<i>Grounds mechanic and geotechnology</i> - Frédéric COLLIN, Bertrand FRANÇOIS	B1	Q2	21	21	-	4
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Period 4

STE1.41 Field applications and visits

GERE0039-1	<i>Field applications and visits</i> - Gilles COLINET, Jeroen MEERSMANS - [23h FT]	B1	Q2	1	-	[+]	2
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GERE0038-1	<i>Energy systems and renewable energies</i> - Frédéric LEBEAU	B1	Q2	18	18	-	4
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Focus optional courses (B1 : 8Cr)

Choose courses for a total of 8 credits (note, GERE0044-1 and GERE0045-1 cannot be taken together): (B1 : 8Cr)

STE1.32 Optional courses 1

GERE0041-1	<i>Instrumentation: data acquisition</i> - Bernard HEINESCH	B1	Q2	9	27	-	4
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HYDR0015-1	<i>Irrigation (english language)</i> - Joost WELLENS - [3h FT]	B1	Q2	13	20	[+]	4
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GERE0044-1	<i>Construction: materials, products, systems and environmental impact</i> - Andrea DI MARIA, JeanFrançois RONDEAUX	B1	Q2	27	12	-	4
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GERE0045-1	<i>Terrestrial ecosystems functioning and C dynamics</i> - Bernard LONGDOZ, Jeroen MEERSMANS	B1	Q2	18	24	-	4
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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 : 27Cr, B2 : 36Cr)

Periods 1 and 2

STE1.10 Core curriculum 1

GERE0015-1	<i>Group project</i> - Adrien MICHEZ - Suppl : Marie DINCHER - [150h AUTR]	B1	Q1	4	-	[+]	5
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HYDR0016-1	<i>Applied fluid mechanics and hydraulics (english language)</i> - Joost WELLENS	B1	Q1	24	12	-	4
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ENVT0045-1	<i>Geomatics and applied remote sensing, Introduction</i> - JeanFrançois BASTIN, Philippe LEJEUNE	B1	Q1	16	22	-	4
GERE0037-1	<i>Modelling the dynamics of biosystems</i> - Bernard LONGDOZ, Benoît MERCATORIS	B1	Q1	14	31	-	5
GEOP0003-2	<i>Origins, analysis and functions of soils</i> - Gilles COLINET, JeanThomas CORNELIS, Aurore DEGRÉ - Suppl : Marie DINCHER, Stefaan DONDEYNE - [9h FT]	B1	Q1	36	36	[+]	9

STE2.11 Environmental management

ECON2248-1	<i>Environmental economy</i> - Kevin MARÉCHAL	B2	Q1	18	-	-	2
DROI1306-1	<i>Environmental law</i> - Martin LAUWERS, Renaud SMAL	B2	Q1	18	-	-	2

Periods 3 and 4

STE2.31 Final work and internship

RSTG0003-1	<i>Internship and professional relations</i> - Catherine COLAUX, Thomas DOGOT, Joost WELLENS	B2	TA	12	-	-	8
RTFE2002-1	<i>Thesis in education environmental sciences and technologies</i> - Catherine CHARLES	B2	Q2	-	-	-	24

Common core courses (B1 : 5Cr, B2 : 24Cr)

Choose courses totalling 5 ECTS from the following : (B1 : 5Cr)

STE1.42 Elective courses 1

GERE0046-1	<i>Resource valorisation and circularity</i> - Gilles COLINET, Aurore DEGRÉ, Andrea DI MARIA - [6h FT]	B1	Q2	21	18	[+]	5
GERE0047-1	<i>Construction: Structural, energy and environmental performance</i> - Andrea DI MARIA, Frédéric LEBEAU, Benoît MERCATORIS Corequisite : GERE0044-1 - Construction : matériaux, produits, systèmes et impacts environnementaux	B1	Q2	30	15	-	5
GERE0048-1	<i>Solutions for conservation and protection of natural resources (english language)</i> - Gilles COLINET, Aurore DEGRÉ, Jeroen MEERSMANS, AnneClaude ROMAIN	B1	Q2	24	21	-	5

Choose 3 courses of 4 credits from: (B2 : 12Cr)

STE 2.11 Elective courses

GERE0026-1	<i>Autonomous navigation in the natural environment</i> - Benoît MERCATORIS - [6h AUTR]	B2	Q1	18	18	[+]	4
INFO8008-1	<i>Multivariate analysis 2: data mining and machine learning (english language)</i> - Yves BROSTAUX, Juan Antonio FERNANDEZ PIERNA, Hélène SOYEURT Prerequisite : STAT1213-1 - Analyse multivariée 1 : exploration et structuration de données	B2	Q1	12	26	-	4
ENVT3060-1	<i>Very high resolution remote sensing applied to the management of natural environments, Introduction</i> - Philippe LEJEUNE, Adrien MICHEZ Prerequisite : ENVT0045-1 - Géomatique et télédétection appliquée	B2	Q1	12	24	-	4
GERE0049-1	<i>Nature in the city</i> - Gilles COLINET, Aurore DEGRÉ, Grégory MAHY	B2	Q1	12	24	-	4
GERE0050-1	<i>Nature-based solutions for climate change mitigation (english language)</i> - Andrea DI MARIA, Bernard HEINESCH, Jeroen MEERSMANS	B2	Q1	24	12	-	4

[...] or 4 credits from the list of alternative courses

Choose a module for a total of 4 credits from: (B2 : 4Cr)

STE2.13 Applied soil and landscape analysis

GERE0051-1 *Applied soil and landscape analysis* - Gilles COLINET, Jeroen MEERSMANS B2 Q1 6 30 - 4

STE2.14 Agrivoltaic modelling: application of complex systems engineering

GERE0052-1 *Agrivoltaic modelling: application of complex systems engineering* - Frédéric LEBEAU - [6h AUTR] B2 Q1 15 15 [+] 4

Prerequisite :

GERE0038-1 - Systèmes énergétiques et énergies renouvelables

STE2.15 Hydrological engineering of landscapes

GERE0053-1 *Hydrological engineering of landscapes* - Aurore DEGRÉ, Adrien MICHEZ - [18h AUTR] B2 Q1 9 9 [+] 4

Prerequisite :

ENVT0045-1 - Géomatique et télédétection appliquée

[...] or 4 credits from the list of alternative courses

Choose a module for a total of 4 credits from: (B2 : 4Cr)

STE2.16 Phenotyping

GERE0054-1 *Phenotyping by imaging* - Vincent LEEMANS, Benoît MERCATORIS B2 Q1 18 18 - 4

STE2.17 Ecosystem exchanges - atmosphere, under climate change

GERE0034-1 *Exchanges between the ecosystem and the atmosphere as a result of climate change* - Bernard HEINESCH, Bernard LONGDOZ, Youri ROTHFUSS - [3h AUTR] B2 Q1 24 12 [+] 4

STE 2.18 Environmental quality improvement

GERE0055-1 *Soil remediation and water purification* - Gilles COLINET, Frank DELVIGNE - [10h AUTR] B2 Q1 24 8 [+] 4

[...] or 4 credits from the list of alternative courses

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

Periods 3 and 4

STE 2.31 English language (B2 : 4Cr)

LANG2957-1 *Practice of specialized English in Sciences and Environmental Technologies: (level C1 - presentation)* - Sophie DEPOTERRE, Estelle MAYARD, Lelania SPERRAZZA, Fiona THEWISSEN - [36h AUTR] B2 TA - 12 [+] 4

All year round

STE 2.32 Dutch language (B2 : 4Cr)

LANG9914-1 *Dutch Intermediate Level (dutch language)* - Catherine PEETERS B2 TA 18 18 - 4

STE 2.33 Spanish language (B2 : 4Cr)

LANG9915-1 *Spanish - beginners* - Valérie COYETTE B2 TA 18 18 - 4

Possibility to choose between 2 and 6 credits among the following courses, replacing the B2 elective courses:

ENVT3050-1 *Quantification of ecosystem services* - Marc DUFRÊNE - [6h AUTR] B2 Q1 9 5 [+] 2
 BIOD0001-3 *Biodiversity management* - Arnaud MONTY - [6h SEM] B2 Q1 18 - [+] 2
 VEGE0037-1 *Innovative system of plant production* B2 Q2 6
 - *Urban agriculture* - Haïssam JIJAKLI 13 13 -
 - *Developmental physiology applied to plant productions* - 12 - [+]
 Pierre DELAPLACE - [6h FT]

	- <i>Physical parameters control of plant productions in controlled conditions</i> - Vincent LEEMANS		9	-	-	
VEGE0028-1	<i>Methods for managing plant health</i> - Frédéric FRANCIS, Olivier GUELTON, Eric HAUBRUGE, François HENRIET, Haissam JIJAKLI, Sébastien MASSART, François VERHEGGEN	B2	Q2	42	15	6
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
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 (english language)</i> - Yves BROSTAUX, David COLIGNON, Benoît MERCATORIS, Hélène SOYEURT	B2	Q2	12	28	4
<i>Notice : INFO8001-1 prerequisite of the INFO9013-1 course</i>						

Bridging courses Master in environmental bioengineering

Compulsory courses (B0 : 58Cr)

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 Corequisite : STAT2004-1 - Statistique appliquée : 1ère partie	B0	Q2	12	12	2
PSYC5897-3	<i>Team, organization and change</i> - Daniel FAULX, Véronique JANS, Tiber MANFREDINI - [44h SEM] Corequisite : MANA0003-1 - Portfolio (Bachelier) GEST3773-1 - Gestion de la qualité GEST3028-2 - Comptabilité et gestion des entreprises	B0	TA	4	-	[+] 2
MANA0003-1	<i>Portfolio (Bachelor)</i> - Yves BECKERS, Hugues CLAESSENS, Gilles COLINET, Aurore DEGRÉ, Dorothée GOFFIN - [24h AUTR] Corequisite : PSYC5897-3 - Equipe, organisation & changement	B0	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	B0	TA	6	-	[+] 2
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 - [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] 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	B0	TA	6	6	[+]	6

Option Environmental Bioengineering

GERE0036-1	<i>Instrumentation: sensors and signals</i> - Benoît MERCATORIS Corequisite : MATH2016-1 - Mathématique générale et modélisation des systèmes dynamiques	B0	Q2	24	24	-	4
HYDR0001-1	<i>General hydrology</i> - Aurore DEGRÉ - Suppl : Adrien MICHEZ	B0	Q2	14	10	-	2
GERE0043-1	<i>Foundations of soil quality</i> - Gilles COLINET, Caroline DE CLERCK, Aurore DEGRÉ	B0	Q2	18	6	-	2
INGE0001-2	<i>Strength of materials and elasticity</i> - Introduction - Laurent DUCHENE - In-depth study - Laurent DUCHENE	B0	Q2	24	-	-	3
PHYS3010-2	<i>Climate changes</i> - Bernard LONGDOZ	B0	Q2	24	-	-	2
ENVT3129-1	<i>Evaluating sustainability</i> - Andrea DI MARIA, Angélique LÉONARD - [2h SEM]	B0	Q2	12	16	[+]	3

Option courses (B0 : 2Cr)

Select 1 course from Environmental sciences and technologies subject : (B0 : 1Nbr)

AGRO0001-1	<i>Basic principles of agriculture and agroecology</i> - Pierre DELAPLACE, Benjamin DUMONT - [4h FT]	B0	Q2	20	-	[+]	2
INGE0002-1	<i>Refrigeration and drying</i> - Nicolas JACQUET, Paul MALUMBA KAMBA	B0	Q2	18	6	-	2