

**Cycle view of the study programme**

B1 Or Th Pr Au Cr

**Compulsory courses (B1 : 20Cr, B2 : 34Cr)**
**Periods 1 and 2**
**STE1.10 Core curriculum 1**

GERE0015-1	<i>Group project</i> - JeanThomas CORNELIS - Suppl : Marie DINCHER - [180h AUTR]	B1	Q1	4	-	[+]	6
HYDR0012-1	<i>Fluid transport and distribution</i> (english language) - - Suppl : Joost WELLENS <b>Corequisite :</b> LANG2956-1 - Pratique de l'anglais de spécialité en Sciences et Technologies de l'environnement : partie 1 (niveau B2+)	B1	Q1	11	10	-	2
ENVT0045-1	<i>Geomatics and applied remote sensing</i> - JeanFrançois BASTIN, Philippe LEJEUNE	B1	Q1	24	33	-	6
GEP0003-2	<i>Pedogenesis, international referential of classification and soil hydrodynamics</i> - JeanThomas CORNELIS, Aurore DEGRÉ - Suppl : Marie DINCHER - [6h FT] <b>Corequisite :</b> LANG2956-1 - Pratique de l'anglais de spécialité en Sciences et Technologies de l'environnement : partie 1 (niveau B2+)	B1	Q1	31	26	[+]	6

**STE2. Environmental law**

DROI1306-1	<i>Environmental law</i> - Martin LAUWERS, Renaud SMAL	B2	Q1	18	-	-	2
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**Periods 3 and 4**
**STE2.31 Final work and internship**

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

**Optional courses (B1 : 40Cr, B2 : 26Cr)**
**Single focus (B1 : 30Cr)**
**Professional Focus (B1 : 30Cr)**
**Periods 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
GERE0019-1	<i>Grounds mechanic and geotechnology</i> - Frédéric COLLIN, Bertrand FRANÇOIS	B1	Q1	21	21	-	4
INGE0004-2	<i>Construction processes</i> - JeanFrançois RONDEAUX - [4h FT]	B1	Q1	20	12	[+]	3

**STE1.10 Core curriculum 2**

MANA0004-1	<i>Portfolio (Master)</i> - Yves BECKERS, Hugues CLAESSENS, Gilles COLINET, Aurore DEGRÉ, Marianne SINDIC - [24h AUTR]	B1	Q2	-	-	[+]	2
LANG2956-1	<i>Practice of specialized English in environment sciences and technologies : Part 1 (level B2+)</i> - Sophie DEPOTERRE, Estelle MAYARD - Suppl : Fiona THEWISSEN - [36h AUTR] <b>Corequisite :</b> HYDR0012-1 - Fluid transport and distribution	B1	Q2	-	12	[+]	4

GERE0037-1 - Modélisation des transferts dans les biosystèmes

#### Period 3

##### STE1.10 Core curriculum 3

GERE0037-1	<i>Modelling of transfers in biosystems</i> - Aurore DEGRÉ, Bernard LONGDOZ, Benoît MERCATORIS <b>Corequisite :</b> LANG2956-1 - Pratique de l'anglais de spécialité en Sciences et Technologies de l'environnement : partie 1 (niveau B2+)	B1	Q2	20	37	-	<b>6</b>
GEP0010-1	<i>Soil quality evaluation</i> - Gilles COLINET	B1	Q2	14	13	-	<b>3</b>
GERE0038-1	<i>Energy systems and renewable energies</i> - Frédéric LEBEAU	B1	Q2	18	18	-	<b>4</b>

#### Period 4

##### STE1.45 Field applications and visits

GERE0039-1	<i>Field applications and visits</i> - - Suppl : Joost WELLENS - [23h FT]	B1	Q2	1	-	[+]	<b>2</b>
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Choose one module totalling 6 credits from : (B1 : 1Nbr)

##### STE1.41 Spatial analysis, soil organisation in the landscape and soil conservation (B1 : 6Nbr)

GERE0023-1	<i>Spatial analysis, organisation of grounds in the landscape and preservation of grounds</i> - Gilles COLINET, Aurore DEGRÉ, Jeroen MEERSMANS - [8h FT] <b>Corequisite :</b> GEP0003-2 - Pédogenèse, référentiels internationaux de classification et hydrodynamique des sols LANG2956-1 - Pratique de l'anglais de spécialité en Sciences et Technologies de l'environnement : partie 1 (niveau B2+)	B1	Q2	23	23	[+]	<b>6</b>
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##### STE1.42 Theory of structural calculations (B1 : 6Nbr)

GERE0021-1	<i>Theory of structural calculations</i> - Laurent DUCHENE, JeanMarc FRANSEN	B1	Q2	29	28	-	<b>6</b>
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Choose one module totalling 4 credits from : (B1 : 1Nbr)

##### STE1.43 Irrigation (B1 : 4Cr)

HYDR0015-1	<i>Irrigation (english language)</i> - - Suppl : Joost WELLENS - [3h FT] <b>Corequisite :</b> LANG2956-1 - Pratique de l'anglais de spécialité en Sciences et Technologies de l'environnement : partie 1 (niveau B2+)	B1	Q2	13	20	[+]	<b>4</b>
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##### STE1.44 Rural engineering technologies (B1 : 4Cr)

GERE0028-2	<i>Building physics and special techniques</i> - Frédéric LEBEAU - [3h AUTR]	B1	Q2	9	6	[+]	<b>2</b>
GERE0007-3	<i>Digital electronics</i> - Bernard HEINESCH	B1	Q2	16	8	-	<b>2</b>

#### Periods 1 and 2

Choose courses totalling 4 ECTS from the following : (B2 : 4Cr)

##### STE 2.12 Environmental Techniques and Data Mining

CHIM9248-1	<i>Wastewater engineering (english language)</i> - Frank DELVIGNE	B2	Q1	18	-	-	<b>2</b>
GEST3020-1	<i>Conceiving and economic assessment of project : food crop and agroforestry</i> - Baudouin MICHEL - [9h SEM]	B2	Q1	9	-	[+]	<b>2</b>
ENVT2053-1	<i>Waste management</i> - Luc MINNE - [4h FT]	B2	Q1	14	-	[+]	<b>2</b>
INFO8008-1	<i>Multivaried analysis 2: data mining and machine learning (english language)</i> - Yves BROSTAU, Juan Antonio FERNANDEZ PIERNA, Hélène SOYEURT	B2	Q1	12	26	-	<b>4</b>

**Prerequisite :**

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

**Choose one module totalling 6 credits from : (B2 : 1Nbr)**

**STE 2.13 Practical evaluation of grounds and water resources (B2 : 6Cr)**

GERE0025-1	<i>Practical evaluation of grounds and water resources - Gilles COLINET, Aurore DEGRÉ, Jeroen MEERSMANS, Youri ROTHFUSS - [19h AUTR]</i>	B2	Q1	19	19	[+]	<b>6</b>
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**Prerequisite :**

GEOP0010-1 - Evaluation de la qualité des sols

**STE2.14 Automation in agriculture (B2 : 6Cr)**

GERE0026-1	<i>Automatic - Benoît MERCATORIS - [6h AUTR]</i>	B2	Q1	6	6	[+]	<b>2</b>
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GERE0027-1	<i>Microcontrollers Base - Bernard HEINESCH - [6h AUTR]</i>	B2	Q1	3	15	[+]	<b>2</b>
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GERE0024-1	<i>Digital eco-design - Frédéric LEBEAU</i>	B2	Q1	12	12	-	<b>2</b>
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**Choose one module totalling 6 credits from : (B2 : 1Nbr)**

**STE2.15 Environmental remediation (B2 : 6Cr)**

ENVT2049-2	<i>Introduction to environmental assessment - Angélique LÉONARD - [9h AUTR]</i>	B2	Q1	9	-	[+]	<b>2</b>
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ECON2248-1	<i>Environmental economy - Kevin MARÉCHAL</i>	B2	Q1	18	-	-	<b>2</b>
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GERE0029-1	<i>Ground remediation - Gilles COLINET - [10h FT]</i>	B2	Q1	6	8	[+]	<b>2</b>
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**STE2.16 Precision agriculture (B2 : 6Cr)**

GERE0030-1	<i>Image analysis (english language) - Vincent LEEMANS</i>	B2	Q1	9	9	-	<b>2</b>
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GERE0031-1	<i>Support systems for decision (english language) - Vincent LEEMANS - [6h AUTR]</i>	B2	Q1	6	6	[+]	<b>2</b>
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**Prerequisite :**

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

GERE0032-1	<i>Robotic applications - Benoît MERCATORIS</i>	B2	Q1	9	9	-	<b>2</b>
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**Corequisite :**

GERE0026-1 - Automatique

GERE0027-1 - Base des microcontrôleurs

**Choose one module totalling 6 credits from : (B2 : 1Nbr)**

**GFEN 2.17 Very high-resolution remote sensing applied to the management of natural environments (B2 : 6Cr)**

ENVT3060-1	<i>Very high resolution remote sensing applied to the management of natural environments - Philippe LEJEUNE</i>	B2	Q1	18	36	-	<b>6</b>
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**Prerequisite :**

ENVT0045-1 - Géomatique et télédétection appliquée

**STE2.18 Ecosystem exchanges - atmosphere, under climate change (B2 : 6Cr)**

GERE0034-1	<i>Exchanges between the ecosystem and the atmosphere as a result of climate change - Bernard HEINESCH, Bernard LONGDOZ, Youri ROTHFUSS - [3h AUTR]</i>	B2	Q1	14	40	[+]	<b>6</b>
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**STE2.19 Integrated project on hydrogeophysics (B2 : 6Cr)**

GERE0035-1	<i>Integrated project on hydrogeophysics (english language) - Frédéric NGUYEN</i>	B2	Q1	4	38	-	<b>6</b>
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**STE2.20 Controlled environment agriculture (B2 : 6Cr)**

GERE0033-1	<i>Controlled environment agriculture - Frédéric LEBEAU</i>	B2	Q1	9	27	-	<b>6</b>
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**Choose a language module from : (B2 : 4Cr)**

#### Periods 3 and 4

##### STE 2.31 English language (B2 : 4Cr)

LANG2957-1	<i>Practice of specialized english in sciences and environmental technologies : part 2 (level C1 - presentation)</i> - Sophie DEPOTERRE, Estelle MAYARD - Suppl : Fiona THEWISSEN - [36h AUTR]	B2	Q2	-	12	[+]	4
	<b>Corequisite :</b> RTFE2002-1 - Travail de fin d'études en sciences et technologies de l'environnement						

#### All year round

##### STE 2.32 Dutch language (B2 : 4Cr)

LANG9914-1	<i>Dutch - intermediate</i> - Catherine PEETERS	B2	TA	18	18	-	4
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##### STE 2.33 Spanish language (B2 : 4Cr)

LANG9915-1	<i>Spanish - beginners</i> - Valérie COYETTE	B2	TA	18	18	-	4
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#### Optional activities (B1 : 14Cr, B2 : 4Cr)

RSTG0011-1	<i>Additional internship</i> - N...	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 <b>Prerequisite :</b> INFO8008-1 - Multivaried analysis 2 : data mining et machine learning	B2	Q2	12	28	-	4

## Additional ECTS Master in environmental bioengineering

#### Compulsory courses (B0 : 58Cr)

GEST3028-2	<i>Accounting and management</i> - <i>General accounting</i> - Thomas DOGOT, Philippe LEBAILLY - <i>Management, green accounting and business plan</i> - Thomas DOGOT, Philippe LEBAILLY	B0	Q1	12	12	-	4
GEST3773-1	<i>Management of quality</i> - Sébastien MASSART, Marianne SINDIC - [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 <b>Corequisite :</b> 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] <b>Corequisite :</b> GEST3028-2 - Comptabilité et gestion des entreprises GEST3773-1 - Gestion de la qualité MANA0003-1 - Portfolio (Bachelier)	B0	TA	4	-	[+]	2
MANA0003-1	<i>Portfolio (Bachelor)</i> - Yves BECKERS, Hugues CLAESSENS, Gilles COLINET, Aurore DEGRÉ, Marianne SINDIC - [24h AUTR] <b>Corequisite :</b> PSYC5897-3 - Equipe, organisation & changement	B0	TA	-	-	[+]	2
RSTG0008-1	<i>Internship (Bachelor)</i> - Hélène SOYEURT - [18h AUTR]	B0	TA	6	-	[+]	2

**Corequisite :**

GEST3773-1 - Gestion de la qualité  
 GEST3028-2 - Comptabilité et gestion des entreprises  
 PSYC5897-3 - Equipe, organisation & changement

BIOL2044-1	<i>Plant physiology</i> - Patrick DU JARDIN	B0	Q1	27	9	-	<b>3</b>
BIOL2013-2	<i>General microbiology</i> - Patrick FICKERS, Philippe JACQUES	B0	Q1	16	8	-	<b>2</b>
ENVT2044-1	<i>General ecology</i> - Grégory MAHY, Arnaud MONTY - Suppl : Arnaud MONTY	B0	Q1	24	-	-	<b>2</b>
INFO2038-1	<i>Computer science and algorithmic</i> - Hélène SOYEURT	B0	Q1	2	22	-	<b>2</b>
MATH2016-1	<i>General mathematics and modelling of dynamics systems</i> - Jérôme BINDELLE, Catherine CHARLES, Frank DELVIGNE, Adeline FAYOLLE, Benoît MERCATORIS	B0	Q1	24	24	-	<b>4</b>
PHYS3036-1	<i>Environmental physics</i> - Bernard LONGDOZ	B0	Q1	18	18	-	<b>3</b>
LANG2966-2	<i>English language: level 3</i> - Sophie DEPOTERRE, Estelle MAYARD, Fiona THEWISSEN - Suppl : Ivan DOSEN - [48h E-Lrng]	B0	TA	-	24	[+]	<b>4</b>
INGE0008-1	<i>Multidisciplinary experimental project</i> - Yves BROSTAUX, Pierre DELAPLACE, Sébastien MASSART, Benoît MERCATORIS, Arnaud MONTY, Bernard POCHET - [60h AUTR]	B0	TA	6	6	[+]	<b>6</b>

**Corequisite :**

STAT2005-1 - Statistique appliquée : 2ème partie  
 STAT2004-1 - Statistique appliquée : 1ère partie  
 GEST3773-1 - Gestion de la qualité  
 BIOL2044-1 - Physiologie végétale  
 ENVT2044-1 - Ecologie générale

**Option Environmental Bioengineering**

GEOP0002-1	<i>Edaphology</i> - <i>Edaphology</i> - Aurore DEGRÉ - <i>Edaphology: In-depth study</i> - Aurore DEGRÉ, Youri ROTHFUSS	B0	Q2	20	4	-	<b>3</b>
GERE0036-1	<i>Environmental metrology</i> - Benoît MERCATORIS	B0	Q2	24	24	-	<b>4</b>
	<b>Corequisite :</b> MATH2016-1 - Mathématique générale et modélisation des systèmes dynamiques						
HYDR0001-1	<i>General hydrology</i> - Aurore DEGRÉ	B0	Q2	18	6	-	<b>2</b>
HYDR0007-3	<i>Fluid mechanics</i> - Michel PIROTON	B0	Q2	14	10	-	<b>2</b>
INGE0001-2	<i>Strength of materials and elasticity</i> - <i>Introduction</i> - Laurent DUCHENE - <i>In-depth study</i> - Laurent DUCHENE	B0	Q2	24	-	-	<b>3</b>
PHYS3010-2	<i>Bioclimatology basis</i> - Bernard LONGDOZ	B0	Q2	24	-	-	<b>2</b>

**Option cours (B0 : 2Cr)**

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

AGRO0001-1	<i>Foundation of agriculture</i> - Benjamin DUMONT , Barbara HAUREZ - [4h FT]	B0	Q2	20	-	[+]	<b>2</b>
INGE0002-1	<i>Refrigeration and drying</i> - Nicolas JACQUET, Paul MALUMBA KAMBA	B0	Q2	18	6	-	<b>2</b>