

Block view of the study programme

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Block 1

Compulsory courses

Periods 1 and 2

STE1.10 Core curriculum 1

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| GERE0015-1 | <i>Group project</i> - COLLÉGIALITÉ, Aurore DEGRÉ - [60h AUTR] | Q1 | - | - | [+] | 6 |
| HYDR0012-1 | <i>Fluid transport and distribution</i> (english language) - Sarah GARRÉ - Suppl : Eléonore BECKERS | Q1 | 12 | 12 | - | 2 |
| GEOP0003-2 | <i>Pedogenesis, international referential of classification and soil hydrodynamics</i> - JeanThomas CORNELIS, Aurore DEGRÉ - [6h FT] | Q1 | 36 | 30 | [+] | 6 |
| STAT1213-1 | <i>Multivariate statistical analysis</i> - Yves BROSTAUX | Q1 | 12 | 12 | - | 2 |
| GERE0019-1 | <i>Grounds mechanic and geotechnology</i> - Robert CHARLIER, Frédéric COLLIN - [8h AUTR] | Q1 | 24 | 20 | [+] | 4 |
| INGE0004-2 | <i>Construction processes</i> - Pierre LATTEUR - [4h FT] | Q2 | 18 | 14 | [+] | 3 |

STE1.10 Core curriculum 2

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|------------|--|----|---|----|-----|---|
| MANA0004-1 | <i>Portfolio (Master)</i> - Philippe LEPOIVRE - [24h AUTR] | Q2 | - | - | [+] | 2 |
| LANG2956-1 | <i>Practice of specialized English in environment sciences and technologies : Part 1</i> - Sophie DEPOTERRE, Estelle MAYARD - Suppl : Gwendoline VANDENBORRE - [36h AUTR] | Q2 | - | 12 | [+] | 4 |

Period 3

STE1.10 Core curriculum 3

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|------------|---|----|----|----|-----|---|
| GERE0037-1 | <i>Modelling of transfers in biosystems</i> - Aurore DEGRÉ, Bernard LONGDOZ, Benoît MERCATORIS | Q2 | 24 | 48 | - | 6 |
| GEOP0010-1 | <i>Soil quality evaluation</i> - Gilles COLINET | Q2 | 18 | 18 | - | 3 |
| GERE0038-1 | <i>Energy systems and renewable energies</i> - Frédéric LEBEAU - [4h FT] | Q2 | 32 | 12 | [+] | 4 |

Period 4

STE1.45 Field applications and visits

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| GERE0039-1 | <i>Field applications and visits</i> - Gilles COLINET, COLLÉGIALITÉ - [23h FT] | Q2 | 1 | - | [+] | 2 |
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Optional courses

Single focus

Professional Focus

Period 1 and 2

STE1.10 Core curriculum 1

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| ENVT0045-1 | <i>Geomatics and applied remote sensing</i> - Philippe LEJEUNE - [4h AUTR] | Q1 | 24 | 44 | [+] | 6 |
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Choose one module from the optional courses n°1 (block 1) :

STE1.41 Spatial analysis, soil organisation in the landscape and soil conservation

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| GERE0023-1 | <i>Spatial analysis, organisation of grounds in the landscape and preservation of grounds</i> - Gilles COLINET, JeanThomas CORNELIS, Aurore DEGRÉ, Youri ROTHFUSS - [12h FT] | Q2 | 30 | 30 | [+] | 6 |
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Corequisite :

GEOP0003-2 - Pédogenèse, référentiels internationaux de classification et hydrodynamique des sols

STE1.42 Theory of structural calculations

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|------------|--|----|----|----|---|----------|
| GERE0021-1 | <i>Theory of structural calculations</i> - Vincent DENOËL, Laurent DUCHENE, JeanMarc FRANSSSEN - Suppl : Vincent DENOËL, Laurent DUCHENE, JeanMarc FRANSSSEN | Q2 | 36 | 36 | - | 6 |
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Choose one module totalling 4 credits from :

STE1.43 Irrigation

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| HYDR0015-1 | <i>Irrigation</i> - Sarah GARRÉ - [4h FT] | Q2 | 16 | 26 | [+] | 4 |
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STE1.44 Rural engineering technologies

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| GERE0024-1 | <i>Mitigation of environmental impacts of agricultural practices</i> - Frédéric LEBEAU | Q2 | 12 | 12 | - | 2 |
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| GERE0007-3 | <i>Digital electronics</i> - Bernard HEINESCH | Q2 | 16 | 8 | - | 2 |
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Block 2

Compulsory courses

STE2.31 Final dissertation, training programme and English

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|------------|--|----|---|---|---|----------|
| RSTG0003-1 | <i>Internship and professional relations</i> - Michael GHILISSEN, Frédéric LEBEAU, Didier VAN CAILLIE | TA | - | - | - | 8 |
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| LANG2957-1 | <i>Practice of specialized english in sciences and environmental technologies :</i> part 2 - Sophie DEPOTERRE, Estelle MAYARD - Suppl : Gwendoline VANDENBORRE - [36h AUTR] | Q2 | - | 12 | [+] | 4 |
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Period 4

STE2. Environmental law

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| DROI1306-1 | <i>Environmental law</i> - Martin LAUWERS, Renaud SMAL | Q1 | 24 | - | - | 2 |
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Optional courses

Single focus

Professional Focus

Periods 3 and 4

STE2.31 Final dissertation, training programme and English

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|------------|----------------------------|----|---|---|---|-----------|
| RTFE2002-1 | <i>Final thesis</i> - N... | Q2 | - | - | - | 24 |
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Periods 1 and 2

Choose courses totalling 4 ECTS from the following :

STE 2.12 Environmental techniques

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| CHIM9248-1 | <i>Basic principles of wastewater treatments</i> - Frank DELVIGNE | Q1 | 24 | - | - | 2 |
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| GEST3020-1 | <i>Conceiving and economic assessment of project : food crop and agroforestry</i> - Baudouin MICHEL - [12h SEM] | Q1 | 12 | - | [+] | 2 |
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| ENVT2053-1 | <i>Physical aspects of waste management</i> - Luc MINNE - [6h FT] | Q1 | 18 | - | [+] | 2 |
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Choose one module totalling 6 credits from :

STE 2.13 Practical evaluation of grounds and water resources

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| GERE0025-1 | <i>Practical evaluation of grounds and water resources</i> - Gilles COLINET, JeanThomas CORNELIS, Aurore DEGRÉ - [24h AUTR] | Q1 | 24 | 24 | [+] | 6 |
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Prerequisite :

GERE0023-1 - Analyse spatiale, organisation des sols dans le paysage et conservation des sols

GEOP0010-1 - Evaluation de la qualité des sols

STE2.14 Automation in agriculture

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| GERE0026-1 | <i>Automatic</i> - Benoît MERCATORIS - [8h AUTR] | Q1 | 8 | 8 | [+] | 2 |
| GERE0027-1 | <i>microcontrollers Base</i> - Bernard HEINESCH Prerequisite : GERE0007-3 - Electronique digitale | Q1 | 4 | 20 | - | 2 |
| GERE0028-1 | <i>Building physics and special techniques</i> - Frédéric LEBEAU - [4h AUTR] | Q1 | 12 | 8 | [+] | 2 |

Choose one module totalling 6 credits from :

STE2.15 Environmental remediation

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|------------|--|----|----|---|-----|---|
| ENVT2049-2 | <i>Introduction to environmental assessment</i> - Angélique LÉONARD - [12h AUTR] | Q1 | 12 | - | [+] | 2 |
| ECON2248-1 | <i>Environmental economy</i> - Kevin MARÉCHAL | Q1 | 24 | - | - | 2 |
| GERE0029-1 | <i>Ground remediation</i> - Gilles COLINET - [10h FT] | Q1 | 6 | 8 | [+] | 2 |

STE2.16 Precision agriculture

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|------------|--|----|----|----|-----|---|
| GERE0030-1 | <i>Image analysis (english language)</i> - Vincent LEEMANS | Q1 | 12 | 12 | - | 2 |
| GERE0031-1 | <i>Support systems for decision (english language)</i> - Vincent LEEMANS - [8h AUTR] | Q1 | 8 | 8 | [+] | 2 |
| GERE0032-1 | <i>Robotic applications</i> - Benoît MERCATORIS Prerequisite : GERE0026-1 - Automatique GERE0027-1 - Base des microcontrôleurs | Q1 | 12 | 12 | - | 2 |

Choose one module totalling 6 credits from :

STE2.17 Controlled environment agriculture

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| GERE0033-1 | <i>Controlled environment agriculture</i> - Frédéric LEBEAU Prerequisite : GERE0038-1 - Systèmes énergétiques et énergies renouvelables Corequisite : GERE0026-1 - Automatique GERE0027-1 - Base des microcontrôleurs GERE0028-1 - Physique du bâtiment et techniques spéciales GERE0030-1 - Image analysis GERE0031-1 - Support systems for decision GERE0032-1 - Applications robotiques | Q1 | 24 | 48 | - | 6 |
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STE2.18 Plants-ecosystem-climate relations

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| GERE0034-1 | <i>Plants - ecosystems - climate relationship</i> - Bernard HEINESCH, Bernard LONGDOZ - [6h AUTR] | Q1 | 18 | 48 | [+] | 6 |
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STE2.19 Integrated project on hydrogeophysics

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| GERE0035-1 | <i>Integrated project on hydrogeophysics (english language)</i> - Sarah GARRÉ, Frédéric NGUYEN - Suppl : Eléonore BECKERS | Q1 | 4 | 48 | - | 6 |
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Bloc d'aménagement du programme de l'année

Additional ECTS Master in environmental bioengineering

Compulsory courses

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| INGE0008-1 | <i>Multidisciplinary experimental project</i> - Yves BROSTAUX, Pierre DELAPLACE, Patrick DU JARDIN, Sébastien MASSART, | TA | 6 | 6 | [+] | 6 |
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ERCATORIS, Arnaud MONTY, Bernard POCHE - [60h AUTR]

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

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| GEST3028-2 | <i>Accounting and management</i> - Thomas DOGOT, Philippe LEBAILLY | Q1 | 24 | 24 | - | 4 |
| GEST3773-1 | <i>Management of quality</i> - Sébastien MASSART, Marianne SINDIC - [6h AUTR] | Q1 | 18 | - | [+] | 2 |
| | Corequisite : PSYC5897-3 - Equipe, organisation & changement | | | | | |
| STAT2004-1 | <i>Applied statistics : First part</i> - Yves BROSTAUX | Q1 | 12 | 12 | - | 2 |
| | Corequisite : STAT2005-1 - Statistique appliquée : 2ème partie | | | | | |
| STAT2005-1 | <i>Applied statistic : Second part</i> - Yves BROSTAUX | Q2 | 12 | 12 | - | 2 |
| | Corequisite : STAT2004-1 - Statistique appliquée : 1ère partie | | | | | |
| LANG2966-2 | <i>English language : level 3</i> - Sophie DEPOTERRE, Fiona THEWISSEN - [48h E-Lrng] | TA | - | 24 | [+] | 4 |
| PSYC5897-3 | <i>Team, organization and change</i> - JeanFrançois LEROY - [44h SEM] | TA | 4 | - | [+] | 2 |
| | Corequisite : GEST3028-1 - Comptabilité et gestion des entreprises GEST3773-1 - Gestion de la qualité MANA0003-1 - Portfolio (Bachelier) RSTG0008-1 - Stage (Bachelier) | | | | | |
| MANA0003-1 | <i>Portfolio (Bachelor)</i> - Philippe LEPOIVRE - [24h AUTR] | TA | - | - | [+] | 2 |
| | Corequisite : GEST3773-1 - Gestion de la qualité PSYC5897-3 - Equipe, organisation & changement RSTG0008-1 - Stage (Bachelier) | | | | | |
| RSTG0008-1 | <i>Internship (Bachelor)</i> - Philippe LEPOIVRE - [24h AUTR] | TA | - | - | [+] | 2 |
| | Corequisite : GEST3773-1 - Gestion de la qualité GEST3028-2 - Comptabilité et gestion des entreprises MANA0003-1 - Portfolio (Bachelier) PSYC5897-3 - Equipe, organisation & changement | | | | | |
| BIOL2044-1 | <i>Plant physiology</i> - Patrick DU JARDIN | Q1 | 27 | 9 | - | 3 |
| BIOL2013-2 | <i>General microbiology</i> - Micheline VANDENBOL | 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 | 12 | 12 | - | 2 |
| MATH2016-1 | <i>General mathematics and modelling of dynamics systems</i> - Jérôme BINDELLE, Catherine CHARLES, Frank DELVIGNE, Adeline FAYOLLE, Benoît MERCATORIS | Q1 | 24 | 24 | - | 4 |
| PHYS3036-1 | <i>Environment Physics</i> - Bernard LONGDOZ | Q1 | 12 | 24 | - | 3 |
| GEOP0002-1 | <i>Edaphology</i> - Aurore DEGRÉ, Sarah GARRÉ | Q2 | 26 | 10 | - | 3 |
| GERE0036-1 | <i>Environmental metrology</i> - Benoît MERCATORIS | Q2 | 24 | 24 | - | 4 |
| | Corequisite : MATH2016-1 - Mathématique générale et modélisation des systèmes dynamiques | | | | | |
| HYDR0001-1 | <i>General Hydrology</i> - Aurore DEGRÉ | Q2 | 20 | 4 | - | 2 |
| | Prerequisite : GEOP0009-1 - Science du sol | | | | | |
| HYDR0007-3 | <i>Fluid mechanics</i> - Michel PIROTON | Q2 | 14 | 10 | - | 2 |

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| INGE0001-2 | <i>Strength of materials and elasticity</i> - Pierre LATTEUR | Q2 | 36 | - | - | 3 |
| PHYS3010-2 | <i>Bioclimatology basis</i> - Bernard LONGDOZ | Q2 | 24 | - | - | 2 |

Option cours

Choose 1 course from Environmental sciences and technologies subject :

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| AGRO0001-1 | <i>Foundation of agriculture</i> - Bernard BODSON, Guy MERGEAI - [4h FT] | Q2 | 20 | - | [+] | 2 |
| INGE0002-1 | <i>Refrigeration and drying</i> - François BERA | Q2 | 18 | 6 | - | 2 |