

#### Cycle view of the study programme

B1 Or Th Pr Au Cr

#### Compulsory courses (B1 : 45Cr)

##### Module 1: Introduction and basic concepts

Opening seminars of the water-energy-food Nexus ; Charles BIELDERS, Gilles COLINET, Bernard TYCHON

|            |  |    |    |      |   |   |  |  |   |
|------------|--|----|----|------|---|---|--|--|---|
| HULG0559-1 | <i>Challenges of sustainable development, transition and development of the EEA Nexus dimension</i>                    | B1 | Q1 |      |   |   |  |  | 4 |
|            | - <i>Challenges of sustainable development and transition</i> -<br>Valentin COUVREUR, Nathalie DELZENNE, Valérie SWAEN |    |    | 22,5 | - | - |  |  |   |
|            | - <i>Development of the EEA Nexus dimension</i> - Charles BIELDERS,<br>Gilles COLINET, Bernard TYCHON                  |    |    | 6    | 3 | - |  |  |   |

##### Module 2: The 3 components of the NEXUS EEA

###### Water security component

|            |  |    |    |    |    |   |  |  |   |
|------------|--|----|----|----|----|---|--|--|---|
| ENVT3040-2 | <i>Integrated and participative management of water resources</i> -<br>Johan DEROUANE, Joost WELLENS | B1 | Q1 | 24 | 16 | - |  |  | 4 |
|------------|--|----|----|----|----|---|--|--|---|

###### Energy security component

|            |   |    |    |    |    |   |  |  |   |
|------------|---|----|----|----|----|---|--|--|---|
| ENVT0892-1 | <i>Integrated energy management, particularly in the construction industry</i> - Philippe ANDRE, N... | B1 | Q1 | 28 | 12 | - |  |  | 4 |
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###### Food security component

|            |  |    |    |    |    |   |  |  |   |
|------------|--|----|----|----|----|---|--|--|---|
| ENVT0073-1 | <i>Agricultural production systems and food security</i> - Antoine DENIS,<br>Pierre OZER, Bernard TYCHON | B1 | Q1 | 20 | 20 | - |  |  | 4 |
|------------|--|----|----|----|----|---|--|--|---|

##### Module 3: Interconnections of the 3 components of the EEA Nexus and case studies

|            |   |    |    |      |      |   |     |  |   |
|------------|---|----|----|------|------|---|-----|--|---|
| ENVT0074-1 | <i>Nexus Water-Energy-Food seminars: case studies of interconnections</i> -<br>Charles BIELDERS, Gilles COLINET, Antoine DENIS, Bernard TYCHON -<br>[38h SEM, 10h Vis.] | B1 | TA | -    | -    |   | [+] |  | 4 |
| HULG0560-1 | <i>Natural resources: appropriation and resistance</i> - An ANSOMS  | B1 | Q2 | 30   | -    | - |     |  | 3 |
| HULG0561-1 | <i>Water-Food Nexus: modelling and analysis tools</i> - Mathieu JAVAUX,<br>Marnik VANCLOOSTER - Suppl : Alice ALONSO  | B1 | Q2 | 22,5 | 22,5 | - |     |  | 4 |

##### Module 4: Technical tools

|            |   |    |    |    |    |   |  |  |   |
|------------|---|----|----|----|----|---|--|--|---|
| ENVT2027-4 | <i>Application of teledetection and geographical information systems for environmental management</i> - Antoine DENIS, Bernard TYCHON | B1 | Q1 | 12 | 24 | - |  |  | 3 |
|------------|---|----|----|----|----|---|--|--|---|

##### Module 5: Personal work in the form of an internship

|            |  |    |    |   |   |  |     |  |    |
|------------|--|----|----|---|---|--|-----|--|----|
| STFE0035-1 | <i>Personal work in the form of an internship</i> - COLLÉGIALITÉ - [1,5mois<br>Internship] | B1 | Q2 | - | - |  | [+] |  | 15 |
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#### Optional courses (B1 : 15Cr)

Remarque - Pour un PAE de plus de 60 crédits, contacter l'Apparitorat

##### Module 2: The 3 components of the NEXUS EEA

[...] En accord avec le Jury, choisir des cours pour un total de 7 à 8 crédits, dont maximum 1 cours parmi les cours ENVT3035-2 et ENVT0068-2

###### Water security component

|            |  |    |    |      |      |   |     |  |   |
|------------|--|----|----|------|------|---|-----|--|---|
| HULG0562-1 | <i>Irrigation and drainage</i> - Mathieu JAVAUX, Joost WELLENS   | B1 | Q2 | 22,5 | 22,5 | - |     |  | 4 |
| ENVT3035-2 | <i>Wastewater treatment, production of drinking water and recovery of wastewater for irrigation</i> - Hugues JUPSIN - [10h FT] | B1 | Q1 | 24   | 6    |   | [+] |  | 4 |

###### Energy security component

|            |  |    |    |    |    |   |  |  |   |
|------------|--|----|----|----|----|---|--|--|---|
| ENVT0905-1 | <i>Energy communities</i> - Philippe ANDRE | B1 | Q1 | 20 | 20 | - |  |  | 4 |
|------------|--|----|----|----|----|---|--|--|---|

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|------------|--|----|----|----|---|-----|----------|
| ENVT0068-2 | <i>Exploitation of renewable energy</i> - Philippe ANDRE, Manfred GREGER, N... - [0,5d FT] | B1 | Q1 | 37 | 3 | [+] | <b>4</b> |
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#### Food security component

|            |   |    |    |    |   |   |          |
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| HULG0487-1 | <i>Soil management and development in warm region</i> - Charles BIELDERS, Bruno DELVAUX | B1 | Q2 | 22 | 8 | - | <b>3</b> |
|------------|---|----|----|----|---|---|----------|

|            |  |    |    |   |    |     |          |
|------------|--|----|----|---|----|-----|----------|
| GEST3019-2 | <i>Food policies and strategies</i> (english language) - Hossein AZADI - [3h FT] | B1 | Q1 | 9 | 15 | [+] | <b>3</b> |
|------------|--|----|----|---|----|-----|----------|

#### Module 3: Interconnections of the 3 components of the EEA Nexus and case studies

[...] En accord avec le Jury, choisir des cours pour un total de 5 à 6 crédits parmi :

|            |  |    |    |    |   |   |          |
|------------|--|----|----|----|---|---|----------|
| GEOG0073-1 | <i>Town and country planning, food and energy security</i> - Serge SCHMITZ | B1 | Q2 | 24 | - | - | <b>3</b> |
|------------|--|----|----|----|---|---|----------|

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|------------|---|----|----|------|---|---|----------|
| HULG0490-1 | <i>Evaluation of the environmental impact: diagnosis and indicators</i> - Charles BIELDERS, Pierre DEFOURNY | B1 | Q2 | 22,5 | - | - | <b>3</b> |
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|------------|--|----|----|----|---|-----|----------|
| ENVT0075-1 | <i>Waste: water, energy and food resources</i> - Luc MINNE - [3h Vis.] | B1 | Q2 | 21 | - | [+] | <b>3</b> |
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|------------|---|----|----|----|---|---|----------|
| ECON0945-1 | <i>Economy, energy and environment</i> - Nadia DE ZOTTI, HenryJean GATHON, Axel GAUTIER | B1 | Q1 | 20 | - | - | <b>2</b> |
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#### Module 4: Technical tools

Choose, in accordance with the Jury, 1 course among : (B1 : 2Cr)

|            |  |    |    |    |    |   |          |
|------------|--|----|----|----|----|---|----------|
| HULG0563-1 | <i>Evaluation of the environmental impact: project and introduction to managing databases, part F: Managing databases</i> - Antoine DENIS, Guillaume LOBET | B1 | Q2 | 12 | 12 | - | <b>2</b> |
|------------|--|----|----|----|----|---|----------|

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|------------|--|----|----|----|----|---|----------|
| ENVT0736-4 | <i>Development projects management and communication, Part 1: Development projects management</i> - N..., Bernard TYCHON | B1 | Q1 | 12 | 12 | - | <b>2</b> |
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| GEST7085-1 | <i>Leadership best practices</i> (english language) - Michael GHILISSEN | B1 | Q2 | - | 16 | - | <b>2</b> |
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