

**Cycle view of the study programme**

B1 Or Th Pr Au Cr

**Compulsory course (B1 : 15Cr)**

SMEM0024-1 *Final thesis - COLLÉGIALITÉ* B1 TA - - - **15**

**Optional courses (B1 : 45Cr)**

With the approval of the Jury (cf. infra - notes), choose courses totalling 15 ECTS from the 4 themed modules below, 5 ECTS may be replaced by compulsory courses from the programme of the 1st Master in Environmental Management, professional focus : (B1 : 15Cr)

**Energy issues**

ENVT0867-1 *Environmental performance of buildings -* B1 Q2 20 20 - **3**  
JeanMarie HAUGLUSTAINE

ENVT0019-2 *Energy balance and CO2 emissions on a building life-cycle* B1 Q2 **4**  
- *Part 1 : Buildings to be built -* Philippe ANDRE, 20 20 -  
JeanMarie HAUGLUSTAINE  
- *Part 2 : Existing buildings -* Philippe ANDRE, 20 20 -  
JeanMarie HAUGLUSTAINE

SPOL2306-1 *Policy of Energy* B1 Q2 **3**  
- *Part 1 : Policies to reduce emissions -* Maxime HABRAN, 9 9 -  
Quentin MICHEL  
- *Part 2 : Regional and local policies -* JeanMarie HAUGLUSTAINE 9 9 -

**Lang management**

ENVT3018-1 *Mobility and sustainable development -* Pierre LANNOY B1 Q2 12 12 - **2**

ENVT2027-2 *Application of teledetection and geographical information systems* B1 Q2 16 32 - **4**  
*for environmental management -* Bernard TYCHON

ARCH3257-1 *Spatial planning -* Jacques TELLER B1 Q2 20 30 - **4**

**Environment, risks and health**

ENVT3016-1 *Environmental toxicology and health* B1 Q2 **6**  
- *Part 1 : Ecotoxicology and quantification of ecotoxicological risk -* 24 18 -  
Célia JOAQUIMJUSTO  
- *Part 2 : Environmental toxicology and health impacts -* 12 18 -  
Corinne CHARLIER

ENVT3017-1 *Risk management and health* B1 Q2 **4**  
- *Part 1 : Introduction to risk management -* Catherine FALLON, 12 12 -  
Pierre OZER - Suppl : Aline THIRY  
- *Part 2 : Microbiological risk -* HenryMichel CAUCHIE, 12 12 -  
Leslie OGORZALY, Christian PENNY

**Instruments for governance**

ENVT0013-1 *Assessment tools (impact assessment, LCA) -* Alain HANSON, B1 Q2 30 20 - **3**  
Nathalie SEMAL

ENVT0014-2 *Multicriteria analysis -* JeanJacques BOREUX B1 Q2 15 15 - **2**

ENVT0015-2 *Tools of environmental management (EMS, prospective) -* B1 Q2 24 12 - **3**  
Nathalie SEMAL, Pierre M. STASSART

ENVT3015-1 *Analysis of project and communication -* Dorothée DENAYER B1 Q2 8 16 - **2**

[...] the compulsory courses in the programme of block 1 of the Master in Environmental Science and Management, with a specialised focus (maximum 5 ECTS)

*Notice* : there is a scheduling conflict between the classes in the 'Energy Stakes' and 'Land Management' modules on the one hand, and between the classes for the 'Environment, risks and health' and 'Governance Instruments' modules on the other. Students are asked to choose 15 course ECTS in modules with compatible schedules.

Choose, in accordance with the Jury, 1 module among : (B1 : 1Nbr)

*Notice* : If students later wish to follow a Masters 120, they cannot enrol for the focus corresponding to the 30 credits chosen.

#### Environmental Monitoring

Choose courses totalling 30 ECTS out of the following :

ENVT3019-1	<i>Data collection and processing</i> - Part 1 : Methodology and selection of samples - AnneClaude ROMAIN - Part 2 : Data processing tools - N...	B1	Q1	24	12	-	5
ENVT3020-1	<i>Tools for measuring environmental parameters : hydrosphere, geosphere and biosphere</i> - Part 1 : Hydrosphere - Vincent DEBBAUT, N... - Part 2 : Geosphere - Vincent DEBBAUT - Part 3 : Biosphere including landscape - Célia JOAQUIMJUSTO	B1	Q1	12	12	-	5
ENVT3021-1	<i>Tools for measuring environmental parameters : atmosphere</i> - Part 1 : Ambient air quality - AnneClaude ROMAIN - Part 2 : Odors from the environment - AnneClaude ROMAIN - Part 3 : Noise - JeanJacques EMBRECHTS - Part 4 : Ionizing and non ionizing radiations - Véronique BEAUVOIS, AnneSophie CARNOY (GRAMME)	B1	Q1	24	12	-	7
ENVT3022-1	<i>Tools for measuring environmental parameters : energy flows</i> - Philippe ANDRE	B1	Q1	20	16	-	3
ENVT3023-1	<i>Information representation</i> - Part 1 : Indicators - AnneClaude ROMAIN - Part 2 : Analysis of systems as a method of data management - Philippe ANDRE - Part 3 : Spatial information - Bernard TYCHON	B1	Q1	8	4	-	4
ENVT3024-1	<i>Introduction to the decision-making aid under the Bayesian paradigm</i> - JeanJacques BOREUX	B1	Q1	24	24	-	3
ENVT3025-1	<i>Environment and health</i> - Part 1 : Indoor air quality - AnneClaude ROMAIN - Part 2 : Waterborne diseases - HenryMichel CAUCHIE, Leslie OGORZALY, Christian PENNY - Part 3 : Impact on human health - Martyna KUSKE	B1	Q1	8	8	-	3

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#### Societies-environments interfaces

Choose courses totalling 30 ECTS out of the following :

##### Science and Society

ENVT3026-1	<i>Social study of science and technology</i> - François MELARD - Suppl : Clémence MASSART	B1	Q1	30	18	-	4
ENVT3027-1	<i>Biodiversity management practices</i> - Dorothée DENAYER, Lucienne STRIVAY	B1	Q1	30	6	-	3
ENVT3028-1	<i>Citizen science</i> - François MELARD, Pierre M. STASSART	B1	Q1	18	18	-	3

##### Governance and sustainable development

ENVT3029-1	<i>Public policy</i> - Catherine FALLON, N..., Pierre M. STASSART - Suppl : Patrick STEYAERT	B1	Q1	18	18	-	3
ENVT0040-2	<i>Theory and interim management</i> - Pierre M. STASSART	B1	Q1	24	24	-	4

##### Methodologies

ENVT3030-1 *Qualitative investigation techniques* - Dorothée DENAYER, François MELARD, Nathalie SEMAL, Pierre M. STASSART - Suppl : Clémence MASSART B1 Q1 27 45 - **6**

ENVT3031-1 *Environmental communication issues* - Nathalie SEMAL B1 Q2 12 12 - **2**

ENVT3032-1 *Mapping of knowledge on the web* - Aurore FRANÇOIS, François MELARD B1 Q1 6 18 - **2**

#### Fieldwork

ENVT0021-2 *Case Study* - Dorothée DENAYER, François MELARD, Nathalie SEMAL, Pierre M. STASSART - Suppl : Clémence MASSART B1 Q2 4 32 - **3**

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#### Developing countries

Choose courses totalling 30 ECTS out of the following :

ENVT3033-1 *Biodiversity and development* - Dorothée DENAYER, Alain HAMBUCKERS B1 Q1 18 18 - **3**

ENVT2011-1 *Climatology and agrometeorology* - Michel ERPICUM, Bernard TYCHON B1 Q1 48 - - **4**

ENVT3034-1 *Geopolitics and social development* - Philippe LEBAILLY B1 Q1 24 24 - **4**

ENVT3035-1 *Sewage treatment and drinking water production* - Hugues JUPSIN, N..., Fouad ZOUHIR B1 Q1 30 24 - **4**

ENVT3036-1 *Soil conservation* - Gilles COLINET, Pierre OZER B1 Q1 24 12 - **3**

ENVT2061-1 *Organisation of urban space* - N... - [12h SEM] B1 Q1 12 - [+] **2**

ENVT2063-3 *Waste management* - Luc MINNE B1 Q1 24 - - **2**

ENVT2028-2 *Food security and early warning systems* - René GOMMES, Bernard TYCHON B1 Q1 18 18 - **3**

ENVT3037-1 *Project and communication conception and design* - Bakary DJABY, N... B1 Q2 18 18 - **3**

ENVT2066-1 *Integrated management practices and participatory water resources* - Francis ROSILLON B1 Q1 12 12 - **2**

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#### Integrated management of water resources

Choose courses totalling 30 ECTS out of the following :

ENVT3055-1 *Environmental Climatology, Partim 1* - Bernard TYCHON B1 Q1 18 12 - **3**

ENVT3055-2 *Environmental Climatology, Partim 2* - Bakary DJABY, Moussa EL JARROUDI B1 Q2 15 10 - **2**

GEOL1031-1 *Management of groundwater quantity and quality* - Serge BROUYÈRE, Philippe ORBAN - [1d FW] B1 Q2 24 24 [+] **5**

ENVT3038-1 *Management of hydrographic and hydraulic networks* - Pierre ARCHAMBEAU, Benjamin DEWALS, Sébastien ERPICUM, Michel PIROTON B1 Q1 30 24 - **5**

ENVT3039-1 *Sewage treatment and water treatment* - Hugues JUPSIN, N..., Fouad ZOUHIR B1 Q1 30 24 - **5**

ENVT3040-1 *Integrated and participative management of water resources* - N..., Francis ROSILLON B1 Q1 30 24 - **5**

ENVT3041-1	<i>Analysis and decision-making aid tools for integrated management of water resources</i> - JeanFrançois DELIÈGE, Marie LANG	B1	Q1	30	24	-	5
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#### Renewable energies

Choose courses totalling 30 ECTS out of the following :

MECA0459-1	<i>Applied thermodynamics. Energy conversion techniques. Thermic power stations</i> - Ahmed RASSILI	B1	Q1	20	20	-	3
ENVT3042-1	<i>Energy management in buildings</i> - Philippe ANDRE, JeanMarie HAUGLUSTAINE	B1	Q1	24	12	-	3
MECA0457-2	<i>Combustion. Technical and environmental aspects</i> - Philippe NGENDAKUMANA	B1	Q1	18	6	-	2
ENVT0866-2	<i>Atmospheric pollution. Management of gaseous waste</i> - Angélique LÉONARD, AnneClaude ROMAIN	B1	Q1	18	18	-	3
MECA0453-3	<i>Optimal use of energy in systems and processes</i> - Michel FEIDT	B1	Q1	18	24	-	3
ENVT3043-1	<i>Air conditioning in buildings</i> - Philippe ANDRE	B1	Q1	24	24	-	5
ENVT0874-3	<i>Non conventional energy technologies and promotion of renewable energy</i> - Philippe ANDRE, Manfred GREGER, Olivier LOTTIN - Suppl : Fabien CLAUDE	B1	Q1	54	48	-	8
ELEC0446-1	<i>Electric Energy System</i> - Damien ERNST	B1	Q1	16	8	-	3

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### Additional ECTS Master in environmental science and management - organized in Arlon (60 ECTS)

#### Optional courses (B0 : 14Cr)

Depending on the student's previous training and with the agreement of the jury, choose courses for a maximum of 14 credits among the following : (B0 : 14Cr)

ENVT3054-3	<i>Methodological Approach to Environmental Science, Part 1: Analysis, expression and reflexivity</i> - Philippe ANDRE, Vincent DEBBAUT, AnneClaude ROMAIN - Suppl : Fabien CLAUDE	B0	Q1	24	24	-	4
ENVT3054-2	<i>Methodological Approach to Environmental Science, Partim 2 : Project</i> - Philippe ANDRE, Vincent DEBBAUT, Ninfa GRECO, AnneClaude ROMAIN - Suppl : Fabien CLAUDE - [36h Mon. WS]	B0	Q2	-	12	[+]	4
LANG2972-1	<i>English 1</i> - ISLV	B0	Q1	12	12	-	2
LANG2973-1	<i>English 2</i> - ISLV	B0	Q2	12	12	-	2
ENVT3012-1	<i>Good practices in the laboratory and in the field : safety, hygiene, environment</i> - Vincent DEBBAUT, Alain HANSON	B0	Q1	16	8	-	2
ENVT3053-1	<i>Introduction to Social Science</i> - Michel DACCACHE	B0	Q1	12	12	-	2