

**Block view of the study programme**

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**Block 1**

**Compulsory course**

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

**Optional themes modules**

En accord avec le Jury (cf. infra - remarque), choisir un des modules thématiques ci-dessous, 6 crédits pouvant être remplacés par d'autres cours du programme du Master en sciences de gestion et gestion de l'environnement, à finalité spécialisée :

**Sustainable habitat and land**

ENVT0867-1	<i>Environmental performance of buildings</i> (english language) - JeanMarie HAUGLUSTAINE, Stéphane MONFILS	Q2	20	20	-	<b>3</b>
ENVT0019-2	<i>Energy balance and CO2 emissions on a building life-cycle</i> - Part 1 : <i>Buildings to be built</i> - Philippe ANDRE, JeanMarie HAUGLUSTAINE - Part 2 : <i>Existing buildings</i> - Philippe ANDRE, JeanMarie HAUGLUSTAINE	Q2	20	20	-	<b>4</b>
SPOL2306-1	<i>Energy and territorial policies</i> - Part 1 : <i>European policies</i> - Maxime HABRAN, Quentin MICHEL - Part 2 : <i>Regional and local policies</i> - JeanMarie HAUGLUSTAINE, Stéphane MONFILS - Part 3 : <i>Prospective scenario</i> - Pierre M. STASSART	Q2	9	9	-	<b>3</b>
ENVT3018-1	<i>Mobility and sustainable development</i> - Mario COOLS	Q2	12	12	-	<b>2</b>
ARCH3257-1	<i>Spatial planning</i> - Christophe BREUER, JeanMarie HALLEUX	Q2	14	24	-	<b>3</b>

**Environment, risks and health**

ENVT3016-1	<i>Environmental toxicology and health</i> - Part 1 : <i>Ecotoxicology and quantification of ecotoxicological risk</i> - Célia JOAQUIMJUSTO - Part 2 : <i>Environmental toxicology and health impacts</i> - Corinne CHARLIER	Q2	24	18	-	<b>6</b>
ENVT3017-1	<i>Risk management and health</i> - Part 1 : <i>Introduction to risk management</i> - Catherine FALLON, Pierre OZER - Part 2 : <i>Microbiological risks</i> - HenryMichel CAUCHIE, Leslie OGORZALY, Christian PENNY	Q2	24	24	-	<b>6</b>
ENVT0053-1	<i>Seminar - Health and environment issues</i> - N..., Nathalie SEMAL	Q2	12	24	-	<b>3</b>

*Notice* : Replacement of classes from the modules above by other classes from the specialised Masters programme in Environmental Sciences and Management may lead to timetable clashes. Students are strongly requested only to continue with this replacement if their timetables are compatible.

[...] the compulsory courses in the programme of block 1 of the Master in environmental science and management, with a specialised focus (maximum 6 ECTS)

**In agreement with the Jury, choose 30 course credits from one of the five modules below, 6 of which may be replaced by courses from the Master in environmental management sciences, professional focus :**

*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 :

ENVT0055-1	<i>Methodology and sampling</i> - AnneClaude ROMAIN	Q1	24	12	-	<b>3</b>
ENVT3020-1	<i>Tools for measuring environmental parameters : hydrosphere,</i>	Q1	32	28	-	<b>6</b>

*geosphere - Land contamination and degradation and biosphere -*  
Vincent DEBBAUT, Célia JOAQUIMJUSTO, Yves MARNEFFE

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	Q1	24	12	-		<b>7</b>
ENVT3022-1	<i>Tools for measuring environmental parameters : energy flows -</i> Philippe ANDRE	Q1	20	16	-		<b>3</b>
ENVT3023-1	<i>Information representation</i> - Part 1 : Indicators - AnneClaude ROMAIN - Part 2 : Identification of systems - Philippe ANDRE - Part 3 : Spatial information - Marie LANG, Julien MINET, Bernard TYCHON	Q1	8	8	-		<b>4</b>
ENVT3024-1	<i>Environmental data processing -</i> JeanJacques BOREUX, AnneClaude ROMAIN	Q1	24	24	-		<b>4</b>
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	Q1	8	8	-		<b>3</b>

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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 - [24h SEM]	Q1	12	-	[+]	<b>4</b>
ENVT3027-1	<i>Biodiversity management practices -</i> Dorothée DENAYER	Q1	36	-	-	<b>4</b>
ENVT3028-1	<i>Citizen science -</i> François MELARD, Pierre M. STASSART - Suppl : Charlotte BREDA, Philippe CHAMARET	Q1	36	-	-	<b>4</b>

##### Governance and sustainable development

ENVT3029-1	<i>Public policy and action -</i> Catherine FALLON, Patrick STEYAERT	Q1	24	-	-	<b>4</b>
ENVT0040-2	<i>Transitions theory and management, Ecological transitions -</i> Pierre M. STASSART - Suppl : Audrey VANKEERBERGHEN - [12h SEM]	Q1	24	-	[+]	<b>4</b>

##### Methodologies

ENVT3030-1	<i>Qualitative investigation techniques -</i> François MELARD, Nathalie SEMAL - [30h SEM]	Q1	12	-	[+]	<b>4</b>
ENVT0021-2	<i>Field training : case studies -</i> Dorothée DENAYER, François MELARD, Pierre M. STASSART - Suppl : Corentin HECQUET - [12h SEM, 48h FW]	Q2	9	-	[+]	<b>6</b>

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#### Developing countries

Choose courses totalling 30 ECTS out of the following :

ENVT2025-2	<i>Participatory environmental management</i> - Part A - Dorothée DENAYER, Alain HAMBUECKERS - Practical work - Dorothée DENAYER, Alain HAMBUECKERS	Q1	18	-	-	<b>3</b>
ENVT2011-2	<i>Climatology and agrometeorology, Partim climatologie -</i>	Q1	24	-	-	<b>2</b>

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ENVT2011-3	<i>Climatology and agrometeorology, Partim agrométéorologie</i> - Bernard TYCHON	Q1	18	6	-	2
ENVT3034-1	<i>Geopolitics and social development</i> - Olivier DUPONT, Philippe LEBAILLY	Q1	24	24	-	4
ENVT3035-1	<i>Sewage treatment and drinking water production</i> - Hassan EL HALOUANI, Hugues JUPSIN, Fouad ZOUHIR	Q1	30	24	-	4
ENVT3036-1	<i>Soil conservation</i> - Gilles COLINET, Bernard TYCHON	Q1	24	12	-	3
GEOG0040-1	<i>The organisation of urban environments</i> - JeanMarie HALLEUX - [6h SEM]	Q1	12	-	[+]	2
ENVT2063-3	<i>Waste management</i> - Luc MINNE	Q1	24	-	-	2
ENVT2028-2	<i>Food security and early warning systems</i> - Bernard TYCHON	Q1	18	18	-	3
ENVT3037-1	<i>Project and communication conception and design</i> - N...	Q1	18	18	-	3
ENVT2066-1	<i>Integrated management practices and participatory water resources</i> - JeanFrançois DELIÈGE, Joost WELLENS	Q1	12	12	-	2

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#### Integrated management of water resources

Choose courses totalling 30 ECTS out of the following :

ENVT3055-1	<i>Environmental climatology, Part 1</i> - Bernard TYCHON	Q1	12	10	-	2
ENVT3055-2	<i>Environmental climatology, Part 2</i> - Moussa EL JARROUDI	Q2	12	10	-	2
GEOL1031-1	<i>Management of groundwater quantity and quality</i> - Serge BROUYÈRE, Philippe ORBAN - [1d FW]	Q2	24	24	[+]	5
ENVT3038-1	<i>Management of hydrographic and hydraulic networks</i> - Pierre ARCHAMBEAU, Benjamin DEWALS, Sébastien ERPICUM, Michel PIROTON	Q1	30	24	-	5
ENVT3039-1	<i>Sewage treatment and water treatment</i> - Hugues JUPSIN, N..., Fouad ZOUHIR	Q1	38	32	-	6
ENVT3040-1	<i>Integrated and participative management of water resources</i> - Joost WELLENS	Q1	22	16	-	4
ENVT3041-1	<i>Analysis and decision-making aid tools for integrated management of water resources</i> - JeanFrançois DELIÈGE	Q1	22	16	-	4
ENVT0056-1	<i>Irrigation and water management</i> - N..., Joost WELLENS, Fouad ZOUHIR	Q1	22	16	-	2

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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> - - Suppl : Vincent HANUS	Q1	20	4	-	2
ENVT3059-1	<i>Energy optimisation in construction and integrating renewable energies</i> - Philippe ANDRE, JeanMarie HAUGLUSTAINE	Q1	24	12	-	3
MECA0457-2	<i>Combustion. Technical and environmental aspects</i> - Philippe NGENDAKUMANA	Q1	18	6	-	2
ENVT0866-2	<i>Atmospheric pollution. Management of gaseous waste</i> - Angélique LÉONARD, AnneClaude ROMAIN	Q1	30	6	-	3

MECA0453-3	<i>Optimal use of energy in systems and processes</i> - - Suppl : Abdelhamid KHEIRI, Olivier LOTTIN	Q1	21	21	-	<b>3</b>
ENVT3043-1	<i>Air conditioning in buildings</i> - Philippe ANDRE	Q1	30	30	-	<b>5</b>
ENVT0874-3	<i>Renewable energies : technologies and project</i> - Philippe ANDRE, Manfred GREGER - Suppl : Olivier LOTTIN - [12h Mon. WS]	Q1	48	48	[+]	<b>9</b>
ELEC0446-1	<i>Electrical energy systems</i> - Damien ERNST	Q1	24	12	-	<b>3</b>
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**In agreement with the jury and for specific reasons, courses in the Master's program in environmental science and management may be replaced by courses in other programs.**

**Bloc d'aménagement du programme de l'année**

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

### **Optional courses**

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 :

ENVT3054-4	<i>Methodological Approach to Environmental Science</i> - <i>Part 1: Analysis, expression and reflexivity</i> - Vincent DEBBAUT, Ninfa GRECO, JeanMarie HAUGLUSTAINE, AnneClaude ROMAIN, Claude SCHEUREN - <i>Partim 2 : Project</i> - Vincent DEBBAUT, Ninfa GRECO, JeanMarie HAUGLUSTAINE, AnneClaude ROMAIN, Claude SCHEUREN - [36h Mon. WS]	TA	24	24	-	<b>8</b>
ENVT3054-2	<i>Methodological Approach to Environmental Science, Partim 2 : Project</i> - Vincent DEBBAUT, Ninfa GRECO, JeanMarie HAUGLUSTAINE, AnneClaude ROMAIN, Claude SCHEUREN - [36h Mon. WS]	Q2	-	12	[+]	<b>4</b>
LANG2972-1	<i>English 1</i> (english language) - Véronique DOPPAGNE, ISLV - Suppl : François PETIT	Q1	12	12	-	<b>2</b>
LANG2973-1	<i>English 2</i> (english language) - Véronique DOPPAGNE, ISLV - Suppl : François PETIT	Q2	12	12	-	<b>2</b>
ENVT3012-1	<i>Good practices in the laboratory and in the field : safety, hygiene, environment</i> - Vincent DEBBAUT, Alain HANSON	Q1	16	8	-	<b>2</b>
ENVT3053-1	<i>Introduction to Social Science</i> - François MELARD	Q1	12	12	-	<b>2</b>