

**First Year**

**Compulsory courses**

**Cross-disciplinary activities**

ENVT0010-1	<i>Integrated approach to environmental issues</i> - Dorothée DENAYER, François MELARD, AnneClaude ROMAIN, Nathalie SEMAL - Suppl : Clémence MASSART	Q1	15	36	-	<b>4</b>
ENVT0846-2	<i>Introduction to Sustainable Development</i> - Pierre M. STASSART	Q1	18	6	-	<b>2</b>
ENVT0849-2	<i>Collection and treatment of environmental information including systems analysis</i> - Philippe ANDRE, AnneClaude ROMAIN		18	18	-	<b>3</b>
ENVT0039-2	<i>Modes of environmental knowledge</i> - François MELARD	Q2	24	12	-	<b>3</b>
ENVT3044-1	<i>Scientific approaches to the environment</i> - Philippe ANDRE, JeanJacques BOREUX, Gauthier EPPE, AnneClaude ROMAIN	Q1	60	15	-	<b>6</b>

**Environment and resources**

ENVT3045-1	<i>Ecosystems : conditions, resources and impact of anthropic activities, Part 1 : conditions, resources, impacts and management</i> - Dorothée DENAYER, Célia JOAQUIMJUSTO	Q1	51	18	-	<b>5</b>
ENVT3045-2	<i>Ecosystems : conditions, resources and impact of anthropic activities, part 2 : industrial activities, transport and emission reduction technologies</i> - Angélique LÉONARD, Roberto RENZONI	Q2	18	6	-	<b>2</b>
ENVT3046-1	<i>Natural resources (water, energy) and humain pressure</i> - Part 1 : Geological map - Frédéric BOULVAIN - Part 2 : Groundwater - Philippe ORBAN	Q1 4	12	-	-	<b>3</b>
ENVT3046-2	<i>Natural resources (water, energy) and humain pressure, Part 3 : Energy resources</i> - JeanMarie HAUGLUSTAINE		12 16	8	-	<b>3</b>

**Society and environment**

SPOL0382-2	<i>Foundations of environmental policies/law</i> - Sylviane LEPRINCE	Q1	36	12	-	<b>4</b>
ECON2270-1	<i>Environmental economy, Part 1 : Elements of economy for environmental sciences</i> - Nadia DE ZOTTI		18	5	-	<b>2</b>
ECON2270-2	<i>Environmental economy, Part 2 : Economy and environment</i> - HenryJean GATHON, Axel GAUTIER, Michel HERMANS, Bernard JURION	Q1	24	5	-	<b>3</b>

**Optional themes modules**

Choose, in accordance with the Jury, 1 module among :

**Energy issues**

ENVT0867-1	<i>Environmental performance of buildings</i> - JeanMarie HAUGLUSTAINE		20	20	-	<b>3</b>
ENVT0019-2	<i>Energy balance and CO2 emissions on a building life-cycle</i> - Part 1 : Buildings to be built - Philippe ANDRE, JeanMarie HAUGLUSTAINE - Part 2 : Existing buildings - Philippe ANDRE, JeanMarie HAUGLUSTAINE		20 20	20	-	<b>4</b>
SPOL2306-1	<i>Policy of Energy</i> - Part 1 : Policies to reduce emissions - Quentin MICHEL - Suppl : Maxime HABRAN - Part 2 : Regional and local policies - JeanMarie HAUGLUSTAINE		9 9	9	-	<b>3</b>

**Instruments for governance**

ENVT0013-1	<i>Assessment tools (impact assessment, LCA)</i> - Alain HANSON, Nathalie SEMAL	Q2	30	20	-	<b>3</b>
ENVT0014-2	<i>Multicriteria analysis</i> - JeanJacques BOREUX	Q2	15	15	-	<b>2</b>
ENVT0015-2	<i>Tools of environmental management (EMS, prospective)</i> - Nathalie SEMAL, Pierre M. STASSART	Q2	24	12	-	<b>3</b>
ENVT3015-1	<i>Analysis of project and communication</i> - Dorothée DENAYER	Q2	8	16	-	<b>2</b>

Choose, in accordance with the Jury, 1 module among :

**Environment, risks and health**

ENVT3016-1	<i>Environmental toxicology and health</i> - Part 1 : <i>Ecotoxicology and quantification of ecotoxicological risk</i> - Célia JOAQUIMJUSTO	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 - Suppl : Anne THIRY - Part 2 : <i>Microbiological risk</i> - HenryMichel CAUCHIE	12	12	-	<b>4</b>
<b>Lang management</b>					
ENVT3018-1	<i>Mobility and sustainable development</i> - Pierre LANNOY	12	12	-	<b>2</b>
ENVT2027-2	<i>Application of teledetection and geographical information systems for environmental management</i> - Bernard TYCHON	16	32	-	<b>4</b>
ARCH3257-1	<i>Spatial planning</i> - Jacques TELLER	Q2	20	30	- <b>4</b>

**Notice :**

Students wishing to specialise in Renewable Energy in the second year must take, in the second year, 30 credits from the "Energy" course specialising in "Buildings" at the University of Luxembourg in the context of the partnership agreement established between the two universities. The 30 credits to be followed at the ULg during the first semester will be chosen, with the approval of the Jury, on the basis of the first year programme.

**Specific refresher courses (organised in Gembloux Agro-Bio Tech) for students who wish to choose the professional focus in biological methods of effluents recovery in the 2nd year**

On the basis of previous education and in agreement with the Jury, choose courses totalling 12 credits among the following :

CHIB0010-1	<i>Basis of physical chemistry applied to environment</i> - Magali DELEU	TA	-	-	-	<b>2</b>
HYDR0001-1	<i>General Hydrology</i> - Aurore DEGRÉ	Q1	24	-	-	<b>2</b>
HYDR0002-1	<i>Water flow in soils</i> - Aurore DEGRÉ		24	-	-	<b>2</b>
HYDR0006-2	<i>Modelling of transfers in soils, 1st part</i> - Aurore DEGRÉ		12	12	-	<b>2</b>
HYDR0011-1	<i>Ecohydrology</i> - Aurore DEGRÉ - [6h FT]		12	6	[+]	<b>2</b>
CHIM9249-1	<i>Microbial ecology</i> - Marc ONGENA		18	6	-	<b>2</b>
CHIM9248-1	<i>Basic principles of wastewater treatments</i> - Frank DELVIGNE	Q1	24	-	-	<b>2</b>
BIOL2013-2	<i>General microbiology, 1st part</i> - Micheline VANDENBOL	Q1	16	8	-	<b>2</b>
BIOL2013-3	<i>General microbiology, 2nd part</i> - Micheline VANDENBOL	Q1	16	8	-	<b>2</b>
BIOI0001-1	<i>Industrial microbiology</i> - Philippe JACQUES		24	-	-	<b>2</b>
ALIM0001-1	<i>Food hygiene</i> - Daniel PORTETELLE, Marianne SINDIC	Q2	18	6	-	<b>2</b>
ANIM0004-2	<i>Microbial biochemistry and physiology</i> - Micheline VANDENBOL - [2h AUTR]	Q2	12	10	[+]	<b>2</b>

## Second Year

**Notice :** The list of refresher courses aimed at students who have direct access to the 2nd year of the Masters with a possible addition to the programme is available from the Jury or from the student services of the Faculty of Sciences.

**Compulsory courses**

ENVT0023-1	<i>Professional work placement</i> - COLLÉGIALITÉ, Pierre M. STASSART	Q2	-	45	-	<b>3</b>
SMEM0041-1	<i>Personal project</i>	TA				<b>27</b>
	- <i>internship</i> - COLLÉGIALITÉ	-	-	-		
	- <i>final thesis</i> - COLLÉGIALITÉ	-	-	-		

**Compulsory courses**

MECA0459-1	<i>Applied thermodynamics. Energy conversion techniques. Thermic power stations</i> - Ahmed RASSILI		20	20	-	<b>3</b>
ENVT3042-1	<i>Energy management in buildings</i> - Philippe ANDRE, JeanMarie HAUGLUSTAINE		24	12	-	<b>3</b>
ELEC0432-2	<i>Electric power system</i> - JeanLouis LILIEN	Q1	24	12	-	<b>3</b>
MECA0457-2	<i>Combustion. Technical and environmental aspects</i> - Philippe NGENDAKUMANA	Q1	18	6	-	<b>2</b>
ENVT0866-2	<i>Atmospheric pollution. Management of gaseous waste</i> - Angélique LÉONARD, AnneClaude ROMAIN	Q1	18	18	-	<b>3</b>
MECA0453-3	<i>Optimal use of energy in systems and processes</i> - Michel FEIDT		18	24	-	<b>3</b>
ENVT3043-1	<i>Air conditioning in buildings</i> - Philippe ANDRE		24	24	-	<b>5</b>
ENVT0874-3	<i>Non conventional energy technologies and promotion of renewable energy</i> - Philippe ANDRE, Manfred GREGER, Olivier LOTTIN - Suppl : Fabien CLAUDE		54	48	-	<b>8</b>

*Notice* : students wishing to choose the focus in renewable energy must have taken, in the first year (2nd semester), 30 ECTS from "Energy" specialising in "Buildings" at the University of Luxembourg in the context of the partnership agreement established between the two universities.