Master en sciences et gestion de l'environnement, à finalité spécialisée en procédés biologiques de valorisation des déchets

		Th	Pr	Au	Cr
First Year					
Compulsory courses					
Cross-disciplinary activities					
ENVT0010-1	*Integrated approach to environmental issues* - Dorothée DENAYER, François MELARD, AnneClaude ROMAIN, Nathalie SEMAL	15	36	-	**4**
ENVT0846-2	*Introduction to Sustainable Development* - Pierre M. STASSART	18	6	-	**2**
ENVT0849-2	*Collection and treatment of environmental information including systems analysis* - Philippe ANDRE, AnneClaude ROMAIN	18	18	-	**3**
ENVT0039-2	*Modes of environmental knowledge* - François MELARD	24	12	-	**3**
ENVT3044-1	*Scientific approaches to the environment* - Philippe ANDRE, JeanJacques BOREUX, Gauthier EPPE, N..., AnneClaude ROMAIN	60	15	-	**6**
Environment and resources					
ENVT3045-1	*Ecosystems : conditions, resources and impact of anthropic activities, Part 1 : conditions, resources, impacts and management* - Célia JOAQUIMJUSTO, Emmanuël SÉRUSIAUX	51	18	-	**5**
ENVT3045-2	*Ecosystems : conditions, resources and impact of anthropic activities, part 2 : industrial activities, transport and emission reduction technologies* - Angélique LÉONARD, Roberto RENZONI	18	6	-	**2**
ENVT3046-1	*Natural resources (water, energy) and humain pressure*				**3**
	- *Part 1 : Geological map* - Frédéric BOULVAIN	4	12	-	
	- *Part 2 : Groundwater* - Philippe ORBAN	12	12	-	
ENVT3046-2	*Natural resources (water, energy) and humain pressure, Part 3 : Energy resources* - JeanMarie HAUGLUSTAINE	16	8	-	**3**
Society and environment					
SPOL0382-2	*Foundations of environmental politicies/law* - Sylviane LEPRINCE	36	12	-	**4**
ECON2270-1	*Environmental economy, Part 1 : Elements of economy for environmental sciences* - Nadia DE ZOTTI	18	5	-	**2**
ECON2270-2	*Environmental economy, Part 2 : Economy and environment* - HenryJean GATHON, Axel GAUTIER, Michel HERMANS, Bernard JURION	24	5	-	**3**
Optional courses					
Optional themes modules					
With the agreement of the council of studies choose a module among the following :					
Energy issues					
ENVT0867-1	*Environmental performance of buildings* - JeanMarie HAUGLUSTAINE	20	20	-	**3**
ENVT0019-2	*Energy balance and CO2 emissions on a building life-cycle*				**4**
	- *Part 1 : Buildings to be built* - Philippe ANDRE, JeanMarie HAUGLUSTAINE	20	20	-	
	- *Part 2 : Existing buildings* - Philippe ANDRE, JeanMarie HAUGLUSTAINE	20	20	-	
SPOL2306-1	*Policy of Energy*				**3**
	- *Part 1 : Policies to reduce emissions* - Quentin MICHEL - Suppl : Maxime HABRAN	9	9	-	
	- *Part 2 : Regional and local policies* - JeanMarie HAUGLUSTAINE	9	9	-	
Instruments for governance					
ENVT0013-1	*Assessment tools (impact assessment, LCA)* - Alain HANSON, Nathalie SEMAL	30	20	-	**3**
ENVT0014-2	*Multicriteria analysis* - JeanJacques BOREUX	15	15	-	**2**
ENVT0015-2	*Tools of environmental management (EMS, prospective)* - Nathalie SEMAL, Pierre M. STASSART	24	12	-	**3**
ENVT3015-1	*Analysis of project and communication* - MarieClaire BILOCQ, Dorothée DENAYER, N...	8	16	-	**2**
With the approval of the Board of Studies, choose one module from :					
Environment, risks and health					

ENVT3016-1	*Environmental toxicology and health*				**6**
	- Part 1 : Ecotoxicology and quantification of ecotoxicological risk - Célia JOAQUIMJUSTO	24	18	-	
	- Part 2 : Environmental toxicology and health impacts - Corinne CHARLIER	12	18	-	
ENVT3017-1	*Risk management and health*				**4**
	- Part 1 : Introduction to risk management - N..., Pierre OZER	12	12	-	
	- Part 2 : Microbiological risk - HenryMichel CAUCHIE	12	12	-	

Lang management

ENVT3018-1	*Mobility and sustainable development* - Pierre LANNOY	12	12	-	**2**
ENVT2027-2	*Application of teledetection and geographical information systems for environmental management* - Bernard TYCHON	16	32	-	**4**
ARCH3257-1	*Spatial planning* - Jacques TELLER	20	30	-	**4**

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 Board of Studies, 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

Depending on the previous training of the student and with the approval of the Board of Studies, choose, if necessary, courses totalling maximum 12 ECTS from :

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

Second Year

Refresher course

Faculty of sciences

Depending on the previous training of the student and with the approval of the Board of Studies, choose, if necessary, courses totalling 6 credits from :

DROI0896-1	*Introduction to Law*	20	5	-	**2**
ECON0921-1	*Introduction to Economy*	20	5	-	**2**
ENVT0870-1	*Introduction to environmental chemistry*	20	5	-	**2**

ENVT0869-1	*Introduction to environmental physics*	20	5	-	**2**
ENVT0041-1	*Introduction to general ecology*	20	5	-	**2**
ENVT0890-1	*Rudiments of thermodynamics*	20	5	-	**2**
MECA0477-1	*Introduction to hydraulics*	20	5	-	**2**

Gembloux Agro-Bio Tech

Depending on the previous training of the student and with the approval of the Board of Studies, choose, if necessary, courses totalling maximum 12 ECTS from :

CHIB0010-1	*Basis of physical chemistry applied to environment*	-	-	-	**2**
HYDR0001-1	*General Hydrology*	24	-	-	**2**
HYDR0002-1	*Water flow in soils*	24	-	-	**22**
HYDR0006-2	*Modelling of transfers in soils, 1st part*	12	12	-	**2**
HYDR0011-1	*Ecohydrology* - [6h FT]	12	6	[+]	**2**
CHIM9249-1	*Microbial ecology*	18	6	-	**2**
BIOL2013-2	*General microbiology, 1st part*	16	8	-	**2**
BIOL2013-3	*General microbiology, 2nd part*	16	8	-	**2**
BIOI0001-1	*Industrial microbiology*	24	-	-	**2**
ALIM0001-1	*Food hygiene*	18	6	-	**2**
ANIM0004-3	*Microbial biochemistry and physiology*	14	10	-	**2**