

One-year master program (60 ECTS)

Compulsory course

SMEM0024-1	<i>Final thesis</i> - COLLÉGIALITÉ	-	-	-	15
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Optional courses

With the approval of the Board of Studies, choose compulsory courses or basic courses totaling 15 ECTS from the programme of the 1st year of Master in Environmental Management, professional focus :

Cross-disciplinary activities

ENVT0010-1	<i>Multidisciplinary approach to environmental issues</i> - François MELARD, Catherine MOUGENOT, Anne-Claude ROMAIN, Marianne VON FRENCKELL	15	36	-	4
ENVT0846-2	<i>Introduction to Sustainable Development</i> - Marc MORMONT, Pierre M. STASSART	18	6	-	2
ENVT0849-2	<i>Collection and treatment of environmental information including systems analysis</i> - Philippe ANDRE, Jacques NICOLAS	18	18	-	3

Environment and resources

ENVT0011-1	<i>Ecosystems : status and resources</i> - Célia JOAQUIM#JUSTO, N..., Emmanuël SÉRUSIAUX	45	6	-	4
ENVT0012-1	<i>Energy supply resources</i> - Jean-Marie HAUGLUSTAINE	18	6	-	2

Impacts

ENVT0848-2	<i>Impacts of human activities on ecosystems and including land use</i> - Célia JOAQUIM#JUSTO, Angélique LÉONARD, Emmanuël SÉRUSIAUX, Marianne VON FRENCKELL	24	18	-	3
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Society and environment

SPOL0382-1	<i>Foundations of environmental policies/law</i> - Sylviane LEPRINCE	20	5	-	3
ECON0920-1	<i>Basis of environmental economy</i> - Henry-Jean GATHON, Axel GAUTIER, Michel HERMANS, Bernard JURION	20	5	-	3

Tools

ENVT0013-1	<i>Assessment tools (impact assessment, LCA)</i> - Jacques NICOLAS, Marianne VON FRENCKELL	30	20	-	4
ENVT0014-1	<i>Multicriteria analysis</i> - Jean-Jacques BOREUX	20	20	-	3
ENVT0015-1	<i>Tools of environmental management (EMS, prospective, spatial planning)</i> - Marc MORMONT, François ROSILLON, Pierre M. STASSART, Marianne VON FRENCKELL	30	20	-	4
ENVT0016-1	<i>Bayesian statistics applied to environment</i> - Jean-Jacques BOREUX	24	6	-	2

Sustainable development

ENVT0873-2	<i>Sustainable development and governance (sociology of policies)</i> - Marc MORMONT	30	20	-	4
ENVT0847-1	<i>Epistemology and environment (environmental knowledge models)</i> - François MELARD	15	10	-	2
ENVT0017-1	<i>Current issues of sustainable development</i> - Catherine MOUGENOT, Pierre M. STASSART	30	20	-	4
ARCH0076-1	<i>Land planning, urban planning and energy</i> - Sigrid REITER, Jacques TELLER	30	20	-	4

Health and environment

ENVT0018-1	<i>Ecotoxicology and quantification of ecotoxicological risk</i> - Célia JOAQUIM#JUSTO	20	20	-	4
ESHY0128-1	<i>Environmental toxicology and health impacts</i> - Corinne CHARLIER	20	20	-	4

Water and soil

GEOL0271-1	<i>Groundwater</i> - Alain DASSARGUES, Philippe ORBAN	20	20	-	3
GEOG0623-1	<i>Drainage</i> - Philippe RIGO	20	20	-	4
GEOG0624-1	<i>Catchments hydrology</i> - Sébastien ERPICUM, Michel PIROTON	20	20	-	3
ESHY0084-3	<i>Environmental microbiology</i> - Monique CARNOL, François ROSILLON	20	20	-	4

Waste

ENVT0844-2	<i>Energy Recovery from Waste</i> - Michel CRINE	15	10	-	2
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Notice : intervention of external speakers

ENVT0857-1	<i>Processing and recycling of solid waste and soils (ex-situ)</i> - Stoyan GAYDARDZHIEV	20	20	-	3
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Energy

ENVT0867-1	<i>Environmental performance of buildings</i> - Jean-Marie HAUGLUSTAINE	20	20	-	3
ENVT0019-1	<i>Energy balance and CO2 emissions on a building life-cycle, Part 1 : Buildings to be built</i> - Jean-Marie HAUGLUSTAINE	20	20	-	3

With the approval of the Board of Studies, choose courses totaling 30 ECTS from one of the four professional focus of the 2nd year of the Master in Environmental Management, professional focus. 5 ECTS can be replaced by courses from the programme of the 1st year of Master in Environmental Management, professional focus :

Monitoring of the environment

ENVT0852-2	<i>Data collection and processing</i> - Jean-Jacques BOREUX, Jacques NICOLAS, Eric PIRARD	36	36	-	6
<i>Measurement tools for environmental parameters</i>					
ENVT2036-2	<i>Part 1 - Hydrosphere, biosphere and geosphere</i> - Henry-Michel CAUCHIE, François ROSILLON, Bernard TYCHON, Jean-Luc VASEL	24	24	-	4
ENVT2037-2	<i>Part 2 - Atmosphere</i> - Véronique BEAUVOIS, Anne-Sophie CARNOY (GRAMME), Jean-Jacques EMBRECHTS, Jacques NICOLAS, Anne-Claude ROMAIN	36	36	-	6
ENVT2038-2	<i>Part 3 : Energy and mass flows</i> - Philippe ANDRE, Jean-Marie HAUGLUSTAINE	24	24	-	4
ENVT0854-1	<i>Information representation</i> - Jean-Jacques BOREUX, Jacques NICOLAS, Bernard TYCHON	40	20	-	5
ENVT0855-2	<i>Decision Support</i> - Jean-Jacques BOREUX	15	15	-	2
ENVT0020-1	<i>Environment and health</i> - Laurence COUNET, Jacques NICOLAS	18	18	-	3

Technical intervention

ENVT0856-2	<i>Characterisation of water and gaseous, liquid and solid effluents</i> - Anne-Claude ROMAIN, Louis VANDEVENNE, Jean-Luc VASEL	36	18	-	4
ENVT0872-1	<i>Water treatment</i> - Jean-Luc VASEL	60	60	-	10
GEOL0272-2	<i>Management of groundwater and surface water quantity</i> - Serge BROUYÈRE, Benjamin DEWALS, Philippe ORBAN, Philippe RIGO	36	36	-	6
GCIV0187-2	<i>Storage : containing waste</i> - Albert BOLLE, Jean-Marie RIGO, Jean-Luc VASEL	36	18	-	4
ENVT0858-2	<i>Remediation of contaminated sites</i> - Serge BROUYÈRE	18	18	-	3
ENVT0859-2	<i>Environmental acoustics</i> - Jean-Jacques EMBRECHTS	18	18	-	3

Sustainable development

SPOL2306-1	<i>Policy of Energy</i>				4
	- <i>Part 1 : Policies to reduce emissions</i> - Quentin MICHEL	9	9	-	
	- <i>Part 2 : Regional and local policies</i> - Jean-Marie HAUGLUSTAINE	9	9	-	
ENVT0860-3	<i>Environmental Controversies</i> - François MELARD	30	18	-	4
GEST3066-1	<i>Transition Strategies</i> - Pierre M. STASSART	18	18	-	3
ENVT0005-4	<i>Representations Practices of Environment and Nature</i> - Catherine MOUGENOT, Lucienne STRIVAY	18	18	-	3
ENVT0862-2	<i>Methodology (quantitative and qualitative analysis)</i> - François MELARD, Catherine MOUGENOT	18	30	-	4
ENVT0861-2	<i>Communication and environment</i> - Marianne VON FRENCKELL	30	24	-	4
ENVT0021-1	<i>Case Study</i> - Jean-Marie HAUGLUSTAINE, François MELARD, Marc MORMONT, Catherine MOUGENOT, Pierre M. STASSART	12	60	-	6
ENVT0022-1	<i>Seminar to prepare the final thesis</i> - COLLÉGIALITÉ	12	12	-	2

Renewable energies

ENVT0865-2	<i>Energy and climate</i> - Jean-Marie HAUGLUSTAINE	18	16	-	2
MECA0459-1	<i>Applied thermodynamics. Energy conversion techniques. Thermic power stations</i> - Ahmed RASSILI	20	20	-	3
CHIM0622-2	<i>Energy vectors</i> - Jean-Marie HAUGLUSTAINE	18	6	-	2
ELEC0432-2	<i>Power system network</i> - Jean-Louis LILIE	24	12	-	3
MECA0457-2	<i>Combustion. Technical and environmental aspects</i> - Philippe NGENDAKUMANA	18	6	-	2
ENVT0866-2	<i>Atmospheric pollution. Management of gaseous waste</i> - Angélique LÉONARD, Anne-Claude ROMAIN	18	18	-	3
MECA0453-2	<i>Optimal use of energy in systems and processes</i> - Michel FEIDT	18	18	-	3
MECA0458-2	<i>Refrigeration and air-conditioning</i> - Philippe ANDRE, Rahal BOUSSEHAIN	24	24	-	4
ENVT0874-2	<i>Non conventional energy technologies and renewables</i> - Philippe ANDRE, Sébastien ERPICUM, Olivier LOTTIN, Michel PIROTTON, Bernard TYCHON	54	54	-	8

[...] At most 5 ECTS of courses from "1re année du grade de master en sciences et gestion de l'environnement, à finalité approfondie"

Two-Year Master Program (120 ECTS)

First Year

Compulsory courses

Cross-disciplinary activities

ENV0010-1	<i>Multidisciplinary approach to environmental issues</i> - François MELARD, Catherine MOUGENOT, Anne-Claude ROMAIN, Marianne VON FRENCKELL	15	36	-	4
ENV00846-2	<i>Introduction to Sustainable Development</i> - Marc MORMONT, Pierre M. STASSART	18	6	-	2
ENV00849-2	<i>Collection and treatment of environmental information including systems analysis</i> - Philippe ANDRE, Jacques NICOLAS	18	18	-	3

Environment and resources

ENV0011-1	<i>Ecosystems : status and resources</i> - Célia JOAQUIM#JUSTO, N..., Emmanuël SÉRUSIAUX	45	6	-	4
ENV0012-1	<i>Energy supply resources</i> - Jean-Marie HAUGLUSTAINE	18	6	-	2

Impacts

ENV00848-2	<i>Impacts of human activities on ecosystems and including land use</i> - Célia JOAQUIM#JUSTO, Angélique LÉONARD, Emmanuël SÉRUSIAUX, Marianne VON FRENCKELL	24	18	-	3
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Society and environment

SPOL0382-1	<i>Foundations of environmental policies/law</i> - Sylviane LEPRINCE	20	5	-	3
ECON0920-1	<i>Basis of environmental economy</i> - Henry-Jean GATHON, Axel GAUTIER, Michel HERMANS, Bernard JURION	20	5	-	3

Optional courses

Upgrading course

On the basis of previous education and in agreement with the Board of Studies, choose courses totalling 6 credits among the following :

SOCI0718-1	<i>Introduction to the Social Sciences</i> - François MELARD, Gautier PIROTTE	20	5	-	2
DROI0896-1	<i>Introduction to Law</i> - Sylviane LEPRINCE	20	5	-	2
ECON0921-1	<i>Introduction to Economy</i> - Nadia DE ZOTTI	20	5	-	2
ENV00870-1	<i>Introduction to environmental chemistry</i> - Gauthier EPPE, Anne-Claude ROMAIN	20	5	-	2
ENV00869-1	<i>Introduction to environmental physics</i> - Jean-Jacques BOREUX, Jacques NICOLAS	20	5	-	2
BIOL0204-4	<i>Introduction to general ecology</i> - Henry-Michel CAUCHIE, Marianne VON FRENCKELL	20	5	-	2
GEOL0273-1	<i>Introduction to Environmental Geology</i> - Alain DASSARGUES	20	5	-	2
ENV00890-1	<i>Rudiments of thermodynamics</i> - Philippe ANDRE	20	5	-	2
MECA0477-1	<i>Introduction to fluid mechanics</i> - Benjamin DEWALS, Michel PIROTON	20	5	-	2

Basic courses

With the approval of the Board of Studies, choose courses totalling 30 ECTS from the following :

Tools

ENV0013-1	<i>Assessment tools (impact assessment, LCA)</i> - Jacques NICOLAS, Marianne VON FRENCKELL	30	20	-	4
ENV0014-1	<i>Multicriteria analysis</i> - Jean-Jacques BOREUX	20	20	-	3
ENV0015-1	<i>Tools of environmental management (EMS, prospective, spatial planning)</i> - Marc MORMONT, François ROSILLON, Pierre M. STASSART, Marianne VON FRENCKELL	30	20	-	4
ENV0016-1	<i>Bayesian statistics applied to environment</i> - Jean-Jacques BOREUX	24	6	-	2

Sustainable development

ENV00873-2	<i>Sustainable development and governance (sociology of policies)</i> - Marc MORMONT	30	20	-	4
ENV00847-1	<i>Epistemology and environment (environmental knowledge models)</i> - François MELARD	15	10	-	2
ENV0017-1	<i>Current issues of sustainable development</i> - Catherine MOUGENOT, Pierre M. STASSART	30	20	-	4
ARCH0076-1	<i>Land planning, urban planning and energy</i> - Sigrid REITER, Jacques TELLER	30	20	-	4

Health and environment

ENV0018-1	<i>Ecotoxicology and quantification of ecotoxicological risk</i> - Célia JOAQUIM#JUSTO	20	20	-	4
ESHY0128-1	<i>Environmental toxicology and health impacts</i> - Corinne CHARLIER	20	20	-	4

Water and soil

GEOL0271-1	<i>Groundwater</i> - Alain DASSARGUES, Philippe ORBAN	20	20	-	3
GEOG0623-1	<i>Drainage</i> - Philippe RIGO	20	20	-	4
GEOG0624-1	<i>Catchments hydrology</i> - Sébastien ERPICUM, Michel PIROTON	20	20	-	3
ESHY0084-3	<i>Environmental microbiology</i> - Monique CARNOL, François ROSILLON	20	20	-	4

Waste

ENVT0844-2 *Energy Recovery from Waste* - Michel CRINE 15 10 - 2

Notice : intervention of external speakers

ENVT0857-1 *Processing and recycling of solid waste and soils (ex-situ)* - Stoyan GAYDARDZHIEV 20 20 - 3

Energy

ENVT0867-1 *Environmental performance of buildings* - Jean-Marie HAUGLUSTAINE 20 20 - 3

ENVT0019-1 *Energy balance and CO2 emissions on a building life-cycle, Part 1 : Buildings to be 20 built* - Jean-Marie HAUGLUSTAINE 20 20 - 3

Notice : les étudiants qui souhaitent choisir la finalité spécialisée en Energies renouvelables en deuxième année suivront, au deuxième semestre, 30 crédits de cours "Energie" orientés "Bâtiment" à l'Université du Luxembourg dans le cadre de la convention de collaboration établie entre les deux universités. Les 30 crédits de cours à suivre à l'ULg durant le premier semestre seront choisis, avec l'accord du Conseil des Etudes, sur base du programme de la première année.

Second year

Compulsory courses

ENVT0023-1	<i>Professional work placement</i> - COLLÉGIALITÉ	-	45	-	3
SMEM0041-1	<i>Personal project</i>				27
	- <i>internship</i> - COLLÉGIALITÉ	-	-	-	
	- <i>final thesis</i> - COLLÉGIALITÉ	-	-	-	

Choose one focus from the following :

Professional focus in monitoring of the environment

Compulsory courses

ENVT0852-2 *Data collection and processing* - Jean-Jacques BOREUX, Jacques NICOLAS, Eric PIRARD 36 36 - 6

Measurement Tools for Environmental Parameters

ENVT2036-2 *Part 1 - Hydrosphere, biosphere and geosphere* - Henry-Michel CAUCHIE, François ROSILLON, Bernard TYCHON, Jean-Luc VASEL 24 24 - 4

ENVT2037-2 *Part 2 - Atmosphere* - Véronique BEAUVOIS, Anne-Sophie CARNOY (GRAMME), Jean-Jacques EMBRECHTS, Jacques NICOLAS, Anne-Claude ROMAIN 36 36 - 6

ENVT2038-2 *Part 3 : Energy and mass flows* - Philippe ANDRE, Jean-Marie HAUGLUSTAINE 24 24 - 4

Measurement Tools

ENVT0854-1 *Information representation* - Jean-Jacques BOREUX, Jacques NICOLAS, Bernard TYCHON 40 20 - 5

ENVT0855-2 *Decision Support* - Jean-Jacques BOREUX 15 15 - 2

ENVT0020-1 *Environment and health* - Laurence COUNET, Jacques NICOLAS 18 18 - 3

Professional focus in technical intervention

Compulsory courses

ENVT0856-2 *Characterisation of water and gaseous, liquid and solid effluents* - Anne-Claude ROMAIN, Louis VANDEVENNE, Jean-Luc VASEL 36 18 - 4

ENVT0872-1 *Water treatment* - Jean-Luc VASEL 60 60 - 10

GEOL0272-2 *Management of groundwater and surface water quantity* - Serge BROUYÈRE, Benjamin DEWALS, Philippe ORBAN, Philippe RIGO 36 36 - 6

GCIV0187-2 *Storage : containing waste* - Albert BOLLE, Jean-Marie RIGO, Jean-Luc VASEL 36 18 - 4

ENVT0858-2 *Remediation of contaminated sites* - Serge BROUYÈRE 18 18 - 3

ENVT0859-2 *Environmental acoustics* - Jean-Jacques EMBRECHTS 18 18 - 3

Professional focus in sustainable development

Compulsory courses

SPOL2306-1 *Policy of Energy* 4

	- <i>Part 1 : Policies to reduce emissions</i> - Quentin MICHEL	9	9	-	
	- <i>Part 2 : Regional and local policies</i> - Jean-Marie HAUGLUSTAINE	9	9	-	
ENVT0860-3	<i>Environmental Controversies</i> - François MELARD	30	18	-	4
GEST3066-1	<i>Transition Strategies</i> - Pierre M. STASSART	18	18	-	3
ENVT0005-4	<i>Representations Practices of Environment and Nature</i> - Catherine MOUGENOT, Lucienne STRIVAY	18	18	-	3
ENVT0862-2	<i>Methodology (quantitative and qualitative analysis)</i> - François MELARD, Catherine MOUGENOT	18	30	-	4
ENVT0861-2	<i>Communication and environment</i> - Marianne VON FRENCKELL	30	24	-	4
ENVT0021-1	<i>Case Study</i> - Jean-Marie HAUGLUSTAINE, François MELARD, Marc MORMONT, Catherine MOUGENOT, Pierre M. STASSART	12	60	-	6
ENVT0022-1	<i>Seminar to prepare the final thesis</i> - COLLÉGIALITÉ	12	12	-	2

Professional focus in renewable energy

Compulsory courses

ENVT0865-2	<i>Energy and climate</i> - Jean-Marie HAUGLUSTAINE	18	16	-	2
MECA0459-1	<i>Applied thermodynamics. Energy conversion techniques. Thermic power stations</i> - Ahmed RASSILI	20	20	-	3
CHIM0622-2	<i>Energy vectors</i> - Jean-Marie HAUGLUSTAINE	18	6	-	2
ELEC0432-2	<i>Power system network</i> - Jean-Louis LILIE	24	12	-	3
MECA0457-2	<i>Combustion. Technical and environmental aspects</i> - Philippe NGENDAKUMANA	18	6	-	2
ENVT0866-2	<i>Atmospheric pollution. Management of gaseous waste</i> - Angélique LÉONARD, Anne-Claude ROMAIN	18	18	-	3
MECA0453-2	<i>Optimal use of energy in systems and processes</i> - Michel FEIDT	18	18	-	3
MECA0458-2	<i>Refrigeration and air-conditioning</i> - Philippe ANDRE, Rahal BOUSSEHAIN	24	24	-	4
ENVT0874-2	<i>Non conventional energy technologies and renewables</i> - Philippe ANDRE, Sébastien ERPICUM, Olivier LOTTIN, Michel PIROTON, Bernard TYCHON	54	54	-	8

Notice : les étudiants qui souhaitent choisir la finalité spécialisée en énergies renouvelables doivent avoir suivi, en première année (2e semestre), les 30 crédits de cours "Energie" orientés "Bâtiment" à l'Université du Luxembourg prévus dans la convention de collaboration établie entre les deux universités.