

First Year

Compulsory courses

Cross-disciplinary activities

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|------------|---|----|----|---|---|
| ENVT0010-1 | <i>Multidisciplinary approach to environmental issues</i> - François MELARD, Catherine MOUGENOT, Anne-Claude ROMAIN, Nathalie SEMAL | 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

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

Impacts

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

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| 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 :

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| 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 |
| ENVT0870-1 | <i>Introduction to environmental chemistry</i> - Gauthier EPPE, Anne-Claude ROMAIN | 20 | 5 | - | 2 |
| ENVT0869-1 | <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 |
| ENVT0890-1 | <i>Rudiments of thermodynamics</i> - Philippe ANDRE | 20 | 5 | - | 2 |
| MECA0477-1 | <i>Introduction to hydraulics</i> - Michel PIROTON | 20 | 5 | - | 2 |

Basic courses

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

Tools

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|------------|--|----|----|---|---|
| ENVT0013-1 | <i>Assessment tools (impact assessment, LCA)</i> - Alain HANSON, Jacques NICOLAS, Nathalie SEMAL | 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, Francis ROSILLON, Nathalie SEMAL, Pierre M. STASSART | 30 | 20 | - | 4 |
| ENVT0016-1 | <i>Bayesian statistics applied to environment</i> - Jean-Jacques BOREUX | 24 | 6 | - | 2 |

Sustainable development

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|------------|---|----|----|---|---|
| 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

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|------------|--|----|----|---|---|
| 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

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| GEOL0271-1 | <i>Groundwater</i> - Alain DASSARGUES, Philippe ORBAN | 20 | 20 | - | 3 |
| GEOG0623-1 | <i>Sustainable development of waterways</i> - Philippe RIGO | 20 | 5 | - | 3 |

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| REAU0001-1 | <i>Hydrology and surface hydraulics</i> - Michel PIROTTON | 25 | 25 | - | 4 |
| ESHY0084-3 | <i>Environmental microbiology</i> - Monique CARNOL, Francis ROSILLON | 20 | 20 | - | 4 |
| Waste | | | | | |
| ENVT0844-2 | <i>Energy Recovery from Waste</i> - Michel CRINE | 15 | 10 | - | 2 |
| <i>Notice</i> : intervention of external speakers | | | | | |
| ENVT0857-1 | <i>Processing and recycling of solid waste and soils (ex-situ)</i> - Stoyan GAYDARDZHIEV | 20 | 20 | - | 3 |
| 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, students can also choose another course from the ULg courses' programme | | | | |

Notice : students wishing to specialise in Renewable Energy in the second year must take, in the second term, 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 term will be chosen, with the approval of the Board of Studies, on the basis of the first year programme.

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 Board of Studies or from the student services of the Faculty of Sciences.

Compulsory courses

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| 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 | - | - | - | |

Compulsory courses

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|------------|---|----|----|---|---|
| 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 LILIEN | 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, Olivier LOTTIN, Bernard TYCHON | 54 | 54 | - | 8 |

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