

## A single year

### Compulsory courses

GEOL0262-1	<i>Geological mapping (personnal fieldwork)</i> - Hans-Balder HAVENITH - [30d FW]	-	-	[+]	<b>10</b>
GEOL0295-1	<i>Geowriting and geocommunication</i> - Annick ANCEAU	20	20	-	<b>4</b>
SMEM0021-1	<i>Final thesis</i> - COLLÉGIALITÉ	-	-	-	<b>15</b>

### Optional courses

With the approval of the Board of Studies, choose courses totaling 31 ECTS from :

#### Paleontology-Sedimentology

##### Courses held in even years :

GEOL0296-1	<i>Clays and environment</i> - Nathalie FAGEL (Even years)	15	15	-	<b>4</b>
GEOL0263-1	<i>Astrobiology</i> - Philippe CLAEYS, Véronique DEHANT, Moreno GALLEN, Emmanuelle JAVAUX, Yaël NAZÉ, Annick WILMOTTE (Even years)	30	15	-	<b>5</b>
GEOL0214-1	<i>Sedimentary deposits</i> - Edouard POTY - [2d FW] (Even years)	15	15	[+]	<b>4</b>
GEOL0297-1	<i>Diagenesis and dynamics of sedimentary basins</i> - Frédéric BOULVAIN, Anne-Christine DA SILVA (Even years)	15	15	-	<b>4</b>

##### Courses held in odd years :

GEOL0224-2	<i>Paleoclimatology</i> - Nathalie FAGEL - [1d FW] (Odd years)	15	15	[+]	<b>4</b>
GEOL1022-1	<i>Evolution of the biosphere in the Precambrian</i> - Emmanuelle JAVAUX (Odd years)	30	-	-	<b>4</b>
GEOL1023-1	<i>Palynology - advanced course on Paleozoic spores</i> - Philippe STEEMANS (Odd years)	30	-	-	<b>4</b>
GEOL0218-1	<i>The principles and methods of evolution</i> - Edouard POTY (Odd years)	15	-	-	<b>3</b>
GEOL0220-1	<i>Cainozoic Stratigraphy</i> - Emile ROCHE (Odd years)	15	-	-	<b>3</b>

##### Courses organized each year :

GEOL0229-2	<i>Oil geology</i> - Pierre CORNET	20	20	-	<b>4</b>
GEOG0212-1	<i>Pedology</i> - N... - Suppl : Patrick ENGELS - [1d FW]	15	8	[+]	<b>3</b>
SPAT0027-4	<i>Climate change and impacts</i> - Louis FRANÇOIS, Guy MUNHOVEN	15	15	-	<b>3</b>

#### Geochemistry-magmatic petrology

##### Courses held in even years :

GEOL1024-1	<i>Modelling of magma chambers</i> - Jacqueline VANDER AUWERA (Even years)	20	30	-	<b>5</b>
GEOL0223-1	<i>Supplements to Tectonics</i> - Olivier BOLLE (Even years)	15	15	-	<b>4</b>

##### Courses held in odd years :

GEOL0209-1	<i>Isotopic geochemistry and geochronology</i> - Jacqueline VANDER AUWERA (Odd years)	20	-	-	<b>3</b>
GEOL0228-1	<i>Crystallochemistry of rock-forming minerals</i> - André-Mathieu FRANSOLET (Odd years)	20	-	-	<b>3</b>

##### Courses organized each year :

GEOL0213-1	<i>Geodynamics</i> - N... - Suppl : Jean-Paul LIÉGEOIS	15	-	-	<b>3</b>
GEOL0254-1	<i>Gravimetrics, magnetism, and their geological applications</i> - Michel EVERAERTS	15	15	-	<b>4</b>
CRIS0204-1	<i>Crystallography - additional issues</i> - Frédéric HATERT	15	-	-	<b>3</b>
GEOL0282-1	<i>Sedimentary and environmental geochemistry</i> - Nathalie FAGEL	20	20	-	<b>4</b>
GEOL0255-2	<i>Geological oceanography</i> - Nathalie FAGEL - [1d FW]	20	20	[+]	<b>4</b>
CLIM0009-1	<i>Biogeochemical cycle modelling and global changes</i> - Louis FRANÇOIS	20	20	-	<b>4</b>
GEOL0225-3	<i>Analytical Geochemistry</i> - Nathalie FAGEL	10	10	-	<b>3</b>
GEOL0256-1	<i>Geochemistry of sediments and interstitial water</i> - Nathalie FAGEL	15	15	-	<b>4</b>

#### Environment and subsoil management

##### Courses held in odd years :

GEOL0298-1	<i>Groundwater quality and protection</i> - Alain DASSARGUES, Philippe ORBAN (Odd years)	15	15	-	<b>4</b>
GEOL0294-1	<i>Paleoalterations in geological times</i> - Johan YANS - [1d FW]	12	12	[+]	<b>4</b>

##### Courses organized each year :

GEOL0267-2	<i>Environmental Geology</i> - Hans-Balder HAVENITH - [1d FW]	30	15	[+]	<b>5</b>
GEOL0270-3	<i>Natural risk</i> - Hans-Balder HAVENITH - [5d FW]	30	15	[+]	<b>6</b>
GCIV0620-1	<i>Introduction to geotechnics</i> - Robert CHARLIER - [1d FW]	30	20	[+]	<b>5</b>
GEOL0020-3	<i>Mineral resources</i> - Eric PIRARD	20	20	-	<b>4</b>
MINE0005-1	<i>Mine and Quarry Working</i> - Jacques TACK	20	-	-	<b>3</b>
GEOL0023-2	<i>Engineering geology (integrated project)</i> - Frédéric NGUYEN - [3d FW]	25	25	[+]	<b>6</b>

GEOL1021-1	<i>Introduction to geophysical exploration</i> - Lucien HALLEUX, Frédéric NGUYEN - [5d 30 FW]	30	30	[+]	<b>6</b>
GEOL0299-1	<i>Techniques of extraction of heavy oils</i> - Xavier LIMPENS	15	-	-	<b>3</b>
SPOL2209-3	<i>Environmental and land policies</i> - Quentin MICHEL	30	-	-	<b>3</b>
<b>Environmental management</b>					
ENVT0031-2	<i>Society / Environment (epistemology, law, economics and social sciences towards the environment)</i> - François MELARD, Marc MORMONT	24	12	-	<b>3</b>
ENVT0030-2	<i>Managing the environment (transitional issues, instruments, case studies)</i> - Jean-Marie HAUGLUSTAINE, François MELARD, Marc MORMONT, Catherine MOUGENOT, Pierre M. STASSART	24	12	-	<b>3</b>
ENVT0034-1	<i>GIS data management</i> - Philippe ANDRE, Jacques NICOLAS, Anne-Claude ROMAIN, Bernard TYCHON	12	12	-	<b>2</b>
ENVT0013-3	<i>Assessment tools (impact assessment, LCA)</i> - Alain HANSON, Jacques NICOLAS, Nathalie SEMAL	12	12	-	<b>2</b>
ENVT0848-3	<i>Impacts of human activities on ecosystems and including land use</i> - Célia JOAQUIM#JUSTO, Angélique LÉONARD, Roberto RENZONI, Emmanuël SÉRUSIAUX	20	10	-	<b>2</b>

*Notice* : Students who choose the two courses from the "Environmental Science and Management" module will have direct access to the 2nd year of the Masters in Environmental Science and Management, organised on the Arlon campus. Other students will also have access to the 2nd year of the Masters in Environmental Science and Management, on the condition that they take courses corresponding to these 12 credits in addition to the 60 credits taken during this study year.

[...] 1 or 2 course(s) from the courses' programme of the University of Liege