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## A single year

### Compulsory courses

GEOL0301-1	<i>Cartography and geomodelling (personnal work)</i> - HansBalder HAVENITH - [15dTA FW]		10	30	[+]	<b>10</b>
GEOL0268-2	<i>Introduction to Research</i> - Annick ANCEAU	Q1	20	20	-	<b>3</b>
SMEM0021-1	<i>Final thesis</i> - COLLÉGIALITÉ	TA	-	-	-	<b>17</b>

### Optional courses

Choose courses, with the approval of the Jury, totalling 30 credits among :

#### Geology

##### Courses held in even years (2014-2015) :

GEOL0296-1	<i>Clays and environment</i> - Nathalie FAGEL (Even years)	Q1	15	15	-	<b>4</b>
GEOL0263-1	<i>Astrobiology</i> - Philippe CLAEYS, Véronique DEHANT, Moreno GALLEN, Emmanuelle JAVAUX, Yaël NAZÉ, Annick WILMOTTE (Even years)	Q2	30	15	-	<b>5</b>
GEOL0302-1	<i>Volcanology</i> - Jacqueline VANDER AUWERA (Even years)	Q2	20	30	-	<b>5</b>
GEOL0223-1	<i>Complement of tectonics</i> - Olivier BOLLE (Even years)	Q2	15	15	-	<b>4</b>
GEOL0306-1	<i>Techniques for extracting non-conventional hydrocarbons</i> - Xavier LIMPENS (Even years)		15	-	-	<b>3</b>
GEOL0303-1	<i>Geomagnetism and environmental magnetism (english language)</i> - AnneChristine DA SILVA	Q2	15	5	-	<b>3</b>

##### Courses held in odd years (2015-2016)

GEOL0224-2	<i>Paleoclimatology</i> - Nathalie FAGEL - [1d FW] (Odd years)	Q1	15	15	[+]	<b>4</b>
GEOL1023-1	<i>Palynology - advanced course on Paleozoic spores</i> - Philippe STEEMANS (Odd years)		30	-	-	<b>4</b>
GEOL0220-1	<i>Cainozoic Stratigraphy</i> - Emile ROCHE (Odd years)		15	-	-	<b>3</b>
GEOL1030-1	<i>Meteoric palaeoweathering</i> - Johan YANS - [1d FW] (Odd years)		12	12	[+]	<b>3</b>

##### Courses organized each year :

GEOL0304-1	<i>Introduction to neotectonics, seismology and physical volcanology (english language)</i> - HansBalder HAVENITH - [2d FW]	Q1	25	15	[+]	<b>4</b>
GEOL0297-1	<i>Diagenesis and dynamics of sedimentary basins</i> - Frédéric BOULVAIN, AnneChristine DA SILVA	Q2	15	15	-	<b>3</b>
GEOL1022-2	<i>Evolution of the biosphere in the Precambrian</i> - Emmanuelle JAVAUX	Q1	20	10	-	<b>3</b>
GEOL0099-1	<i>Phanerozoic biosphere evolution</i> - N... - Suppl : Valentin FISCHER - [2d FW]	Q1	20	-	[+]	<b>4</b>
GEOL0305-2	<i>Paleoecology</i> - N... - [1d FW]		20	-	[+]	<b>3</b>
GEOL0221-1	<i>Quaternary Palynology</i> - N... - Suppl : Mona COURTPICON		15	15	-	<b>4</b>
GEOG0212-1	<i>Pedology</i> - Gilles COLINET - [1d FW]	Q2	15	8	[+]	<b>3</b>
SPAT0027-4	<i>Climate change and impacts</i> - Louis FRANÇOIS, Guy MUNHOVEN	TA	15	15	-	<b>4</b>
CLIM0009-1	<i>Biogeochemical cycle modelling and global changes</i> - Louis FRANÇOIS	Q1	20	20	-	<b>4</b>
SPAT0054-1	<i>Astrophysics and astrochemistry</i> - Michaël DE BECKER	Q2	15	5	-	<b>3</b>
GEOL0282-1	<i>Sedimentary and environmental geochemistry</i> - Nathalie FAGEL	Q1	20	20	-	<b>4</b>
OCEA0082-4	<i>Carbon, nutrient, greenhouse gases dynamics in marine ecosystems and geological oceanography, Geological oceanography (english language)</i> - Nathalie FAGEL - [1d FW]	Q1	20	20	[+]	<b>4</b>
GEOL0225-3	<i>Analytical Geochemistry</i> - Nathalie FAGEL	Q1	10	10	-	<b>3</b>
GEOL0256-1	<i>Geochemistry of sediments and interstitial water</i> - Nathalie FAGEL	Q1	15	15	-	<b>4</b>
GEOL0213-1	<i>Geodynamics</i> - N... - Suppl : Bernard BINGEN		15	-	-	<b>3</b>
GEOL0209-1	<i>Isotopic geochemistry and geochronology</i> - Jacqueline VANDER AUWERA	Q1	20	-	-	<b>3</b>
CRIS0204-1	<i>Complement of crystallography</i> - Frédéric HATERT	Q2	15	-	-	<b>3</b>
GEOL1027-1	<i>Analytical mineralogy</i> - Frédéric HATERT	Q2	15	15	-	<b>3</b>
GEOL0254-1	<i>Gravimetrics, magnetism, and their geological applications</i> - N... - Suppl : Michel EVERAERTS		15	15	-	<b>4</b>
GCIV0620-1	<i>Introduction to geotechnics</i> - Robert CHARLIER, JeanPol RADU - [1d FW]	Q1	30	20	[+]	<b>5</b>
GEOL0020-6	<i>Mineral resources (english language)</i> - Eric PIRARD		30	30	-	<b>5</b>
MINE0005-1	<i>Mine and Quarry Working</i> - Jacques TACK		20	-	-	<b>3</b>
GEOL0313-1	<i>Remediation of contaminated sites</i> - Serge BROUYÈRE - [2d FW, 40h Proj.]	Q1	24	24	[+]	<b>4</b>
GEOL0023-2	<i>Engineering geology (integrated project)</i> - Frédéric NGUYEN - [3d FW]	Q1	25	25	[+]	<b>5</b>

GEOL1021-1	<i>Introduction to geophysical exploration</i> - Lucien HALLEUX, Frédéric NGUYEN - [5d FW]	Q2	30	30	[+]	6
GEOL0260-2	<i>Applied geophysics</i> - Frédéric NGUYEN - [5d FW, 80h Proj.]	Q2	8	20	[+]	5
GEOL0298-1	<i>Groundwater quality and protection</i> - Serge BROUYÈRE, Philippe ORBAN	Q1	15	15	-	4
GEOL0083-3	<i>Groundwater modelling</i> (english language) - Alain DASSARGUES - [30h Labo., 30h Proj.]	Q1	30	-	[+]	5
GEOL0307-1	<i>Geology of hydrocarbons</i> - Pierre CORNET		20	20	-	4
SPOL2209-3	<i>Environmental and land policies</i> - Quentin MICHEL - Suppl : Sophie HANSON	Q1	30	-	-	3
GEOL0308-1	<i>Environmental geology related to renewable energy resources and mining</i> (english language) - HansBalder HAVENITH - [1d FW]	Q2	20	10	[+]	3
GEOL0309-1	<i>Assessment of geological risk</i> (english language) - HansBalder HAVENITH - [6d FW]	TA	30	15	[+]	5
GEOL0236-2	<i>Remote sensing and geological imaging</i> - Eric PIRARD - [50h Proj.]	Q1	30	10	[+]	5
<b>Environmental management</b>						
ENVT0031-2	<i>Society / Environment</i> - Dorothée DENAYER, François MELARD	Q2	24	12	-	3
ENVT0030-2	<i>Managing the environment</i> - JeanMarie HAUGLUSTAINE, François MELARD, Pierre M. STASSART	Q2	24	12	-	3
ENVT0034-1	<i>Environmental data management</i> - Philippe ANDRE, AnneClaude ROMAIN, Bernard TYCHON	TA	12	12	-	2
ENVT0013-3	<i>Assessment tools (impact assessment, LCA)</i> - Alain HANSON, Nathalie SEMAL	Q2	12	12	-	2
ENVT0848-3	<i>Impacts of human activities on ecosystems and including land use</i> - Dorothée DENAYER, Célia JOAQUIMJUSTO, Angélique LÉONARD, Roberto RENZONI	Q1	20	10	-	2

*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