

## One-year master program

### Compulsory courses

GEOL0210-1	<i>Fieldwork in foreign countries Holder</i> - Frédéric BOULVAIN, Nathalie FAGEL, André-Mathieu FRANSOLET, Emmanuelle JAVAUX, Edouard POTY, Jacqueline VANDER AUWERA - [10d FW]	-	-	[+]	<b>6</b>
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>20</b>

### Optional courses

Choose, in agreement with the Board of Studies, several courses totalling 20 credits, amongst :

#### 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 NAZE, 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 (Even years)	15	15	-	<b>4</b>
SPAT0027-2	<i>Climate change and impacts</i> - Louis FRANÇOIS, Guy MUNHOVEN (Even years)	15	-	-	<b>2</b>

##### Courses held in odd years :

GEOL0224-1	<i>Paleoclimatology</i> - Nathalie FAGEL (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>2</b>
GEOL0220-1	<i>Cainozoic Stratigraphy</i> - Emile ROCHE (Odd years)	15	-	-	<b>2</b>

##### Courses organized each year :

GEOL0229-1	<i>Oil geology</i> - Pierre CORNET	15	15	-	<b>4</b>
GEOG0212-1	<i>Pedology</i> - N... - Suppl : Patrick ENGELS - [1d FW]	15	8	[+]	<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>
GEOL0254-1	<i>Gravimetrics, magnetism, and their geological applications</i> - Michel EVERAERTS (Even years)	15	15	-	<b>4</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>2</b>
GEOL0228-1	<i>Crystal chemistry of rock-forming minerals</i> - André-Mathieu FRANSOLET (Odd years)	20	-	-	<b>2</b>
GEOL0217-2	<i>Metallogeny</i> - Michel GAUTHIER (Odd years)	15	15	-	<b>4</b>

##### Courses organized each year :

GEOL0213-1	<i>Geodynamics</i> - N... - Suppl : Jean-Paul LIÉGEOIS	15	-	-	<b>2</b>
GEOL0282-1	<i>Sedimentary and environmental geochemistry</i> - Nathalie FAGEL	20	20	-	<b>4</b>
GEOL0255-1	<i>Geological oceanography</i> - Nathalie FAGEL	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>2</b>
GEOL0256-1	<i>Geochemistry of sediments and interstitial waters.</i> - Nathalie FAGEL	15	15	-	<b>4</b>

#### Environment and subsoil management

##### Course held in even years

GEOL0270-3	<i>Natural risk</i> - Hans-Balder HAVENITH - [5d FW] (Even years)	30	15	[+]	<b>6</b>
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##### Courses held in odd years :

GEOL0267-2	<i>Environmental Geology</i> - Hans-Balder HAVENITH - [1d FW]	30	15	[+]	<b>5</b>
GEOL0294-1	<i>Paleoalterations in geological times</i> - Johan YANS - [1d FW]	12	12	[+]	<b>4</b>

##### Courses organized each year :

GEOL0298-1	<i>Groundwater quality and protection</i> - Serge BROUYÈRE, Alain DASSARGUES, Philippe ORBAN	15	15	-	<b>4</b>
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GCIV0620-1	<i>Introduction to geotechnics</i> - Robert CHARLIER - [1d FW]	30	20	[+]	5
GEOL0020-3	<i>Mineral resources</i> - Eric PIRARD	20	20	-	4
MINE0005-1	<i>Mine and Quarry Working</i> - Jacques TACK	20	-	-	2
GEOL0023-2	<i>Engineering geology (integrated project)</i> - Frédéric NGUYEN - [3d FW]	25	25	[+]	6
GEOL1021-1	<i>Introduction to geophysical exploration</i> - Lucien HALLEUX, Frédéric NGUYEN - [5d FW]	30	30	[+]	6
GEOL0299-1	<i>Techniques of extraction of heavy oils</i> - Xavier LIMPENS	15	-	-	2
SPOL2209-3	<i>Politics of sustainable development (land and environment)</i> - Quentin MICHEL	30	-	-	3
[...]	1 or 2 course(s) from the courses' programme of the University of Liege				

## Two-year master program

### First Year

#### Compulsory courses

GEOL0210-1	<i>Fieldwork in foreign countries Holder</i> - Frédéric BOULVAIN, Nathalie FAGEL, André-Mathieu FRANSOLET, Emmanuelle JAVAUX, Edouard POTY, Jacqueline VANDER AUWERA - [10d FW]	-	-	[+]	6
GEOL0262-1	<i>Geological mapping (personnal fieldwork)</i> - Hans-Balder HAVENITH - [30d FW]	-	-	[+]	10
GEOL0295-1	<i>Geowriting and geocommunication</i> - Annick ANCEAU	20	20	-	4

#### Optional courses

Choose two modules from :

#### Paleontology-Sedimentology Module

Choose, in agreement with the Board of Studies, several courses totalling 20 credits, amongst :

##### Courses held in even years :

GEOL0296-1	<i>Clays and environment</i> - Nathalie FAGEL (Even years)	15	15	-	4
GEOL0263-1	<i>Astrobiology</i> - Philippe CLAEYS, Véronique DEHANT, Moreno GALLENI, Emmanuelle JAVAUX, Yaël NAZE, Annick WILMOTTE (Even years)	30	15	-	5
GEOL0214-1	<i>Sedimentary deposits</i> - Edouard POTY - [2d FW] (Even years)	15	15	[+]	4
GEOL0297-1	<i>Diagenesis and dynamics of sedimentary basins</i> - Frédéric BOULVAIN (Even years)	15	15	-	4
SPAT0027-2	<i>Climate change and impacts</i> - Louis FRANÇOIS, Guy MUNHOVEN (Even years)	15	-	-	2

##### Courses held in odd years :

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

##### Courses organized each year :

GEOL0229-1	<i>Oil geology</i> - Pierre CORNET	15	15	-	4
GEOG0212-1	<i>Pedology</i> - N... - Suppl : Patrick ENGELS - [1d FW]	15	8	[+]	3
[...]	1 or 2 courses in the option not chosen, or in the University of Liège programme of courses				

#### Magmatic Geochemical-Petrology Module

Choose, in agreement with the Board of Studies, several courses totalling 20 credits, amongst :

##### Courses held in even years :

GEOL1024-1	<i>Modelling of magma chambers</i> - Jacqueline VANDER AUWERA (Even years)	20	30	-	5
GEOL0254-1	<i>Gravimetrics, magnetism, and their geological applications</i> - Michel EVERAERTS (Even years)	15	15	-	4

GEOL0223-1	<i>Supplements to Tectonics</i> - Olivier BOLLE (Even years)	15	15	-	4
<b>Courses held in odd years :</b>					
GEOL0209-1	<i>Isotopic geochemistry and geochronology</i> - Jacqueline VANDER AUWERA (Odd years)	20	-	-	2
GEOL0228-1	<i>Crystal chemistry of rock-forming minerals</i> - André-Mathieu FRANSOLET (Odd years)	20	-	-	2
GEOL0217-2	<i>Metallogeny</i> - Michel GAUTHIER (Odd years)	15	15	-	4
<b>Courses organized each year :</b>					
GEOL0213-1	<i>Geodynamics</i> - N... - Suppl : Jean-Paul LIÉGEOIS	15	-	-	2
GEOL0282-1	<i>Sedimentary and environmental geochemistry</i> - Nathalie FAGEL	20	20	-	4
GEOL0255-1	<i>Geological oceanography</i> - Nathalie FAGEL	20	20	-	4
CLIM0009-1	<i>Biogeochemical cycle modelling and global changes</i> - Louis FRANÇOIS	20	20	-	4
GEOL0225-3	<i>Analytical Geochemistry</i> - Nathalie FAGEL	10	10	-	2
GEOL0256-1	<i>Geochemistry of sediments and interstitial waters.</i> - Nathalie FAGEL	15	15	-	4
[...]	1 or 2 courses in the option not chosen, or in the University of Liège programme of courses				

#### Environment-Management of the Subsoil Module

Choose, in agreement with the Board of Studies, several courses totalling 20 credits, amongst :

<b>Course held in even years</b>					
GEOL0270-3	<i>Natural risk</i> - Hans-Balder HAVENITH - [5d FW] (Even years)	30	15	[+]	6
<b>Courses held in odd years :</b>					
GEOL0267-2	<i>Environmental Geology</i> - Hans-Balder HAVENITH - [1d FW] (Odd years)	30	15	[+]	5
GEOL0294-1	<i>Paleoalterations in geological times</i> - Johan YANS - [1d FW] (Odd years)	12	12	[+]	4
<b>Courses organized each year :</b>					
GEOL0298-1	<i>Groundwater quality and protection</i> - Serge BROUYÈRE, Alain DASSARGUES, Philippe ORBAN	15	15	-	4
GCIV0620-1	<i>Introduction to geotechnics</i> - Robert CHARLIER - [1d FW]	30	20	[+]	5
GEOL0020-3	<i>Mineral resources</i> - Eric PIRARD	20	20	-	4
MINE0005-1	<i>Mine and Quarry Working</i> - Jacques TACK	20	-	-	2
GEOL0023-2	<i>Engineering geology (integrated project)</i> - Frédéric NGUYEN - [3d FW]	25	25	[+]	6
GEOL1021-1	<i>Introduction to geophysical exploration</i> - Lucien HALLEUX, Frédéric NGUYEN - [5d FW]	30	30	[+]	6
GEOL0299-1	<i>Techniques of extraction of heavy oils</i> - Xavier LIMPENS	15	-	-	2
SPOL2209-3	<i>Politics of sustainable development (land and environment)</i> - Quentin MICHEL	30	-	-	3
[...]	1 or 2 courses in the option not chosen, or in the University of Liège programme of courses				

## Second year

### Compulsory courses

SMEM0022-1	<i>Final thesis</i> - COLLÉGIALITÉ	-	-	-	28
GEOL0268-1	<i>Introduction to Research</i> - N...	-	-	-	2

### Research Focus

#### Compulsory course

SSTG0011-1	<i>Training</i> - Edouard POTY - [4w Internship]	-	-	[+]	10
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#### Optional courses

[...] With the approval of the Board of Studies of Geology, choose from the courses programme of the ULg additional courses, not previously followed, totaling 20 credits