

Th Pr Au Cr

## First Year

### Compulsory courses

GEOL0007-1	<i>Complement of geology</i> - N...	30	30	-	5
GEOL0021-7	<i>Geophysical prospecting</i> - Lucien HALLEUX, Frédéric NGUYEN - [5d FW]	30	30	[+]	5
GEOL0020-7	<i>Mineral resources (english language)</i> - Eric PIRARD - [1d FW]	30	30	[+]	4
GEOL0249-2	<i>Personal project work in documentary research</i> - Annick ANCEAU, Eric PIRARD	5	25	-	3
GEOL0013-5	<i>Hydrogeology</i> - Alain DASSARGUES - [1d FW]	30	30	[+]	5
GCIV0603-2	<i>Geotechnics and infrastructure</i> - Robert CHARLIER, JeanPol RADU - [1d FW]	30	30	[+]	5
META0431-2	<i>Mineral processing (processes)</i> - Stoyan GAYDARDZHIEV - [1d FW]	30	30	[+]	3
CHIM0004-3	<i>Analytical chemistry</i> - Gauthier EPPE	30	30	-	5
GEOL0289-1	<i>Determinative mineralogy</i> - Frédéric HATERT	20	20	-	3
GEOL0290-1	<i>Introduction to sedimentary petrology</i> - N... - [1d FW]	30	-	[+]	3
GEOL0279-1	<i>Geological mapping</i> - HansBalder HAVENITH - [4d FW]	20	20	[+]	5
GEOL0277-1	<i>Groundwater quality and protection</i> - Serge BROUYÈRE - [1d FW]	20	20	[+]	3
GCIV0045-4	<i>Rock mechanics, tunnels, rock slopes, rock foundations</i> - Robert CHARLIER, Séverine LEVASSEUR - [1d FW]	30	30	[+]	5
GEOL0237-2	<i>Exploiting deposits, quarries and mines</i> - Jacques TACK - [1d FW]	20	10	[+]	2
BIOL0212-1	<i>Introduction to environmental microbiology</i> - Monique CARNOL - Suppl : Olivier GUILLITTE	30	-	-	2
GEOL1028-1	<i>Site investigation</i> - Serge BROUYÈRE, Frédéric NGUYEN - [5d FW]	10	10	[+]	2

### Compulsory courses

CHIM0004-3	<i>Analytical chemistry</i> - Gauthier EPPE	30	30	-	5
GEOL0289-1	<i>Determinative mineralogy</i> - Frédéric HATERT	20	20	-	3
GEOL0006-1	<i>Rocks and sedimentary processes</i> - Frédéric BOULVAIN - [1d FW]	30	-	[+]	3
GEOL0279-1	<i>Geological mapping</i> - HansBalder HAVENITH - [4d FW]	20	20	[+]	5
GEOL0029-4	<i>Tectonics</i> - Olivier BOLLE - [2d FW]	15	15	[+]	3
GEOL0284-1	<i>Geology of Wallonia</i> - Frédéric BOULVAIN - [6d FW]	20	-	[+]	3
GCIV0184-4	<i>Building Materials</i> - Luc COURARD - [1d FW]	20	20	[+]	3
GCIV0185-5	<i>Numerical methods in Civil and Geological Engineering, Linear methods</i> - Laurent DUCHENE, Michel PIROTTON	25	25	-	4
GEOL0097-2	<i>Geostatistics (english language)</i> - Eric PIRARD	30	30	-	5
GEOL0260-2	<i>Applied geophysics</i> - Frédéric NGUYEN - [2d FW]	20	20	[+]	5
GEOL0083-3	<i>Groundwater Modelling</i> - Alain DASSARGUES	30	30	-	5
GCIV0045-4	<i>Rock mechanics, tunnels, rock slopes, rock foundations</i> - Robert CHARLIER, Séverine LEVASSEUR - [1d FW]	30	30	[+]	5
GEOL0277-1	<i>Groundwater quality and protection</i> - Serge BROUYÈRE - [1d FW]	20	20	[+]	3
GEOL1028-1	<i>Site investigation</i> - Serge BROUYÈRE, Frédéric NGUYEN - [5d FW]	10	10	[+]	3
GEOL0237-2	<i>Exploiting deposits, quarries and mines</i> - Jacques TACK - [1d FW]	20	10	[+]	2
GEOL0276-4	<i>Solid waste processing</i> - Stoyan GAYDARDZHIEV - [1,5d FW]	20	20	[+]	3

Notice : Students who have, in their BAC studies, already taken one or more compulsory courses in this Master's programme are obliged to replace them by other courses in this Masters programme or courses in the programme of the Applied Sciences Faculty or of the Sciences Faculty ; this choice must be approved by the President of the cycle's Jury.

### Compulsory courses

MATH0006-1	<i>Introduction to numerical analysis (english language)</i> - Quentin LOUVEAUX - Suppl : Christophe GEUZAINÉ	30	30	-	5
MECA0001-1	<i>Mechanics of materials</i> - JeanPierre JASPART	30	30	-	5
MECA0011-2	<i>Fluid Mechanics : Basics</i> - Michel PIROTTON	20	30	-	4
GEOL0021-7	<i>Geophysical prospecting</i> - Lucien HALLEUX, Frédéric NGUYEN - [5d FW]	30	30	[+]	5
GEOL0020-6	<i>Mineral resources (english language)</i> - Eric PIRARD	30	30	-	5
GEOL0249-2	<i>Personal project work in documentary research</i> - Annick ANCEAU, Eric PIRARD	5	25	-	3
GCIV0603-2	<i>Geotechnics and infrastructure</i> - Robert CHARLIER, JeanPol RADU - [1d FW]	30	30	[+]	5
META0431-2	<i>Mineral processing (processes)</i> - Stoyan GAYDARDZHIEV - [1d FW]	30	30	[+]	5

GCIV0184-4	<i>Building Materials</i> - Luc COURARD - [1d FW]	20	20	[+]	3
GCIV0185-3	<i>Numerical methods in Civil and Geological Engineering, Linear methods</i> - Laurent DUCHENE, Michel PIROTON	30	30	-	5
GEOL0097-1	<i>Geostatistics (english language)</i> - Eric PIRARD	20	20	-	3
GEOL0260-2	<i>Applied geophysics</i> - Frédéric NGUYEN - [2d FW]	20	20	[+]	5
GCIV0045-4	<i>Rock mechanics, tunnels, rock slopes, rock foundations</i> - Robert CHARLIER, Séverine LEVASSEUR - [1d FW]	30	30	[+]	5
GEOL0277-1	<i>Groundwater quality and protection</i> - Serge BROUYÈRE - [1d FW]	20	20	[+]	3
GEOL1028-1	<i>Site investigation</i> - Serge BROUYÈRE, Frédéric NGUYEN - [5d FW]	10	10	[+]	3
GEOL0237-2	<i>Exploiting deposits, quarries and mines</i> - Jacques TACK - [1d FW]	20	10	[+]	2
GEOL0276-4	<i>Solid waste processing</i> - Stoyan GAYDARDZHIEV - [1,5d FW]	20	20	[+]	3
GEOL0083-3	<i>Groundwater Modelling</i> - Alain DASSARGUES	30	30	-	5

#### Compulsory courses

MATH0006-1	<i>Introduction to numerical analysis (english language)</i> - Quentin LOUVEAUX - Suppl : Christophe GEUZAINÉ	30	30	-	5
GEOL0021-7	<i>Geophysical prospecting</i> - Lucien HALLEUX, Frédéric NGUYEN - [5d FW]	30	30	[+]	4
MECA0001-1	<i>Mechanics of materials</i> - JeanPierre JASPART	30	30	-	5
MECA0011-1	<i>Fluid Mechanics : Basics</i> - Michel PIROTON	30	30	-	4
GEOL0020-6	<i>Mineral resources (english language)</i> - Eric PIRARD	30	30	-	5
GEOL0249-2	<i>Personal project work in documentary research</i> - Annick ANCEAU, Eric PIRARD	5	25	-	3
GCIV0603-2	<i>Geotechnics and infrastructure</i> - Robert CHARLIER, JeanPol RADU - [1d FW]	30	30	[+]	5
META0431-2	<i>Mineral processing (processes)</i> - Stoyan GAYDARDZHIEV - [1d FW]	30	30	[+]	5
GCIV0184-4	<i>Building Materials</i> - Luc COURARD - [1d FW]	20	20	[+]	3
GCIV0185-3	<i>Numerical methods in Civil and Geological Engineering, Linear methods</i> - Laurent DUCHENE, Michel PIROTON	30	30	-	5
GEOL0097-1	<i>Geostatistics (english language)</i> - Eric PIRARD	20	20	-	3
GEOL0260-2	<i>Applied geophysics</i> - Frédéric NGUYEN - [2d FW]	20	20	[+]	5
GCIV0045-4	<i>Rock mechanics, tunnels, rock slopes, rock foundations</i> - Robert CHARLIER, Séverine LEVASSEUR - [1d FW]	30	30	[+]	5
GEOL0277-1	<i>Groundwater quality and protection</i> - Serge BROUYÈRE - [1d FW]	20	20	[+]	5
GEOL0237-2	<i>Exploiting deposits, quarries and mines</i> - Jacques TACK - [1d FW]	20	10	[+]	2
GEOL0276-4	<i>Solid waste processing</i> - Stoyan GAYDARDZHIEV - [1,5d FW]	20	20	[+]	3
GEOL1028-1	<i>Site investigation</i> - Serge BROUYÈRE, Frédéric NGUYEN - [5d FW]	10	10	[+]	3

#### Second Year

##### Compulsory courses

GEOL0234-3	<i>Modelling and inversion in geophysics</i> - Frédéric NGUYEN	20	20	-	3
GEOL0236-2	<i>Remote sensing and geological imaging</i> - COLLÉGIALITÉ, Eric PIRARD	30	30	-	5
ATFE0011-1	<i>Final Work (including an introduction to research methodology)</i> - COLLÉGIALITÉ	-	-	-	20

##### Optional courses

Choose one course from the following :

GEOL0008-1	<i>Origin and production of hydrocarbons</i> - Pierre CORNET, Xavier LIMPENS	30	-	-	2
GCIV0090-2	<i>Introduction to free surface flows</i> - Michel PIROTON	15	10	-	2

Final year trip: at the beginning of the academic year, prior to the organisation of the courses, guided tours to companies, geological sites (optional).

##### Compulsory courses

GEOL0234-3	<i>Modelling and inversion in geophysics</i> - Frédéric NGUYEN	20	20	-	3
GEOL0236-2	<i>Remote sensing and geological imaging</i> - COLLÉGIALITÉ, Eric PIRARD	30	30	-	5
ATFE0011-1	<i>Final Work (including an introduction to research methodology)</i> - COLLÉGIALITÉ	-	-	-	20

##### Optional courses

Choose one of the following courses :

GEOL0008-1	<i>Origin and production of hydrocarbons</i> - Pierre CORNET, Xavier LIMPENS	30	-	-	2
GCIV0090-2	<i>Introduction to free surface flows</i> - Michel PIROTON	15	10	-	2

Final year trip: at the beginning of the academic year, prior to the organisation of the courses, guided tours to companies, geological sites (optional).

#### Compulsory courses

GEOL0029-4	<i>Tectonics</i> - Olivier BOLLE - [2d FW]	15	15	[+]	3
GEOL0284-1	<i>Geology of Wallonia</i> - Frédéric BOULVAIN - [6d FW]	20	-	[+]	3
GCIV0184-4	<i>Building Materials</i> - Luc COURARD - [1d FW]	20	20	[+]	3
GCIV0185-5	<i>Numerical methods in Civil and Geological Engineering, Linear methods</i> - Laurent DUCHENE, Michel PIROTON	25	25	-	4
GEOL0097-2	<i>Geostatistics (english language)</i> - Eric PIRARD	30	30	-	4
GEOL0260-2	<i>Applied geophysics</i> - Frédéric NGUYEN - [2d FW]	20	20	[+]	5
GEOL0276-4	<i>Solid waste processing</i> - Stoyan GAYDARDZHIEV - [1,5d FW]	20	20	[+]	3
GEOL0310-1	<i>Integrated project in geological engineering</i> - COLLÉGIALITÉ - [4d FW]	10	30	[+]	5

#### Compulsory courses

GCIV2058-1	<i>Environmental geotechnics (english language)</i> - Frédéric COLLIN - [1d FW]	20	20	[+]	3
GCIV0615-2	<i>Recycling of wastes and industrial by-products in civil engineering (english language)</i> - Luc COURARD - [1d FW]	20	20	[+]	3
GEOL0270-2	<i>Natural risk</i> - HansBalder HAVENITH - [1d FW]	15	15	[+]	3
GEOL0281-3	<i>Environmental aspects of industrial and mining activities</i> - Stoyan GAYDARDZHIEV - [1,5d FW]	25	25	[+]	4
GEOL0282-1	<i>Sedimentary and environmental geochemistry</i> - Nathalie FAGEL	20	20	-	3
GEOL0310-1	<i>Integrated project in geological engineering</i> - COLLÉGIALITÉ - [4d FW]	10	30	[+]	5
ASTG0017-1	<i>Placement</i> - COLLÉGIALITÉ	-	-	-	5

Choose one course from the following :

GEOL0312-1	<i>Process mineralogy (english language)</i> - Eric PIRARD	25	25	-	4
GEOL0313-1	<i>Remediation of contaminated sites</i> - Serge BROUYÈRE - [2d FW]	20	20	[+]	4

#### Compulsory courses

GEOL0234-3	<i>Modelling and inversion in geophysics</i> - Frédéric NGUYEN	20	20	-	3
GEOL0236-2	<i>Remote sensing and geological imaging</i> - COLLÉGIALITÉ, Eric PIRARD	30	30	-	5
ATFE0011-1	<i>Final Work (including an introduction to research methodology)</i> - COLLÉGIALITÉ	-	-	-	20

Final year trip: at the beginning of the academic year, prior to the organisation of the courses, guided tours to companies, geological sites (optional).

#### Optional courses

Choose one course from the following :

GEOL0008-1	<i>Origin and production of hydrocarbons</i> - Pierre CORNET, Xavier LIMPENS	30	-	-	2
GCIV0090-2	<i>Introduction to free surface flows</i> - Michel PIROTON	15	10	-	2

#### Compulsory courses

GCIV2058-1	<i>Environmental geotechnics (english language)</i> - Frédéric COLLIN - [1d FW]	20	20	[+]	3
GCIV0615-2	<i>Recycling of wastes and industrial by-products in civil engineering (english language)</i> - Luc COURARD - [1d FW]	20	20	[+]	3
GEOL0270-2	<i>Natural risk</i> - HansBalder HAVENITH - [1d FW]	15	15	[+]	3
GEOL0281-3	<i>Environmental aspects of industrial and mining activities</i> - Stoyan GAYDARDZHIEV - [1,5d FW]	25	25	[+]	4
GEOL0282-1	<i>Sedimentary and environmental geochemistry</i> - Nathalie FAGEL	20	20	-	3
GEOL0310-1	<i>Integrated project in geological engineering</i> - COLLÉGIALITÉ - [4d FW]	10	30	[+]	5
ASTG0017-1	<i>Placement</i> - COLLÉGIALITÉ	-	-	-	5

Choose one course from the following :

GEOL0312-1	<i>Process mineralogy (english language)</i> - Eric PIRARD	25	25	-	4
GEOL0313-1	<i>Remediation of contaminated sites</i> - Serge BROUYÈRE - [2d FW]	20	20	[+]	4

#### Compulsory courses

GEOL0234-3	<i>Modelling and inversion in geophysics</i> - Frédéric NGUYEN	20	20	-	3
GEOL0236-2	<i>Remote sensing and geological imaging</i> - COLLÉGIALITÉ, Eric PIRARD	30	30	-	5
ATFE0011-1	<i>Final Work (including an introduction to research methodology)</i> - COLLÉGIALITÉ	-	-	-	20

Final year trip : at the beginning of the academic year, prior to the organisation of the courses, guided tours to companies, geological sites (optional)

Choose one course from the following :

GEOL0008-1	<i>Origin and production of hydrocarbons</i> - Pierre CORNET, Xavier LIMPENS	30	-	-	<b>2</b>
GCIV0090-2	<i>Introduction to free surface flows</i> - Michel PIROTON	15	10	-	<b>2</b>

**Compulsory courses**

GCIV2058-1	<i>Environmental geotechnics (english language)</i> - Frédéric COLLIN - [1d FW]	20	20	[+]	<b>3</b>
GEOL0083-3	<i>Groundwater Modelling</i> - Alain DASSARGUES	30	30	-	<b>5</b>
GCIV0615-2	<i>Recycling of wastes and industrial by-products in civil engineering (english language)</i> - Luc COURARD - [1d FW]	20	20	[+]	<b>3</b>
GEOL0270-2	<i>Natural risk</i> - HansBalder HAVENITH - [1d FW]	15	15	[+]	<b>3</b>
GEOL0281-3	<i>Environmental aspects of industrial and mining activities</i> - Stoyan GAYDARDZHIEV - [1,5d FW]	25	25	[+]	<b>4</b>
GEOL0282-1	<i>Sedimentary and environmental geochemistry</i> - Nathalie FAGEL	20	20	-	<b>3</b>
GEOL0310-1	<i>Integrated project in geological engineering</i> - COLLÉGIALITÉ - [4d FW]	10	30	[+]	<b>5</b>
ASTG0017-1	<i>Placement</i> - COLLÉGIALITÉ	-	-	-	<b>4</b>