

## First Year

### Compulsory courses

CHIM0010-2	<i>Knowledge of Non-Metallic Materials</i> - Jean-Marie RIGO	25	-	-	<b>2,5</b>
DROI0724-2	<i>law and engineering</i> - Pascale LECOCQ	15	-	-	<b>2</b>
ELEN0075-2	<i>Analog Electronics</i> - Benoît VANDERHEYDEN	20	20	-	<b>4</b>
GCIV0041-3	<i>Soil Mechanics, Foundations, Roads and Retaining Structures</i> - Robert CHARLIER	20	20	-	<b>4</b>
GCIV0045-3	<i>Rock mechanics, tunnels, rock slopes, rock foundations</i> - Robert CHARLIER	20	20	-	<b>4</b>
GCIV0090-1	<i>Écoulements à surface libre</i> - André LEJEUNE, Michel PIROTON - [1d FW]	25	25	[+]	<b>5</b>
GEOL0023-2	<i>Geology for Engineers</i> - Frédéric NGUYEN - [3d FW]	25	25	[+]	<b>5</b>
INFO0001-1	<i>Introduction to Algorithmics I</i> - Pierre-Arnoûl DE MARNEFFE	30	30	-	<b>6</b>
MATH0002-4	<i>Mathematical Analysis</i> - Eric DELHEZ	30	25	-	<b>5</b>
MATH0006-1	<i>Introduction à l'analyse numérique</i> - Quentin LOUVEAUX	30	30	-	<b>5</b>
MECA0152-1	<i>Applied Thermodynamics</i> - Jean LEBRUN	20	20	-	<b>4</b>
MECA0012-5	<i>Mechanics of materials (english)</i> - Serge CESCOTTO	30	30	-	<b>5,5</b>
META0002-5	<i>Metallic Materials</i> - Jean-Pierre COHEUR	25	-	-	<b>2</b>
META0004-1	<i>Ore Dressing</i> - Stoyan GAYDARDZHIEV	20	20	-	<b>4</b>
MINE0005-1	<i>Mine and Quarry Working</i> - N... - Suppl : Jacques TACK	20	-	-	<b>2</b>

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### Compulsory courses

#### Tools

*Notice : Carried out over four weeks, including exams*

GEOL0234-1	<i>Modelling and inversion in geophysics</i> - Frédéric NGUYEN	15	15	-	<b>3</b>
GEOL0083-2	<i>Groundwater Modelling</i> - Alain DASSARGUES	15	15	-	<b>3</b>
GEOL0236-1	<i>Remote sensing and geo-imaging</i> - Eric PIRARD, Philippe TREFOIS	15	15	-	<b>3</b>
GEOL0097-2	<i>Geostatistics</i> - Eric PIRARD	15	15	-	<b>3</b>

#### Applications

*Notice : Carried out over four weeks, including exams*

GEOL0285-1	<i>Géologie minière et génie minéral</i> - Stoyan GAYDARDZHIEV, Pierre GOOSSENS	15	15	-	<b>3</b>
GEOL0238-1	<i>Groundwater production, protection and remediation</i> - Alain DASSARGUES	15	15	-	<b>3</b>
GEOL0239-1	<i>Natural hazards and geology for engineering</i> - Frédéric NGUYEN	15	15	-	<b>3</b>

#### Multidisciplinary Project

*Notice : Group work on all aspects involved. Large scale works involving geological engineering or mineral extraction industries, including an analysis of their environmental impact*

GEOL0240-1	<i>Group multidisciplinary project</i> - Stoyan GAYDARDZHIEV	-	90	-	<b>9</b>
ASTG0009-1	<i>Stage</i>	-	-	-	<b>5</b>

*Notice : Minimum six weeks, with a report to be written.*

ATFE0001-1	<i>Travail de fin d'études</i>	-	-	-	<b>22</b>
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*Notice : Preferably carried out within the framework of the training programme.*

### Optional courses

#### Optional Module

Choose one of the following courses :

GEOL0241-1	<i>Waste valorisation and storage</i> - Luc COURARD, Jean-Marie RIGO	15	15	-	<b>3</b>
META0024-1	<i>Biométallurgie</i> - N...	15	15	-	<b>3</b>

*Notice : With the permission of the President of the Board of Studies, this course can be replaced by an equivalent module offered by an Erasmus partner school or university, in a Building department or a Geology license.*

Si un des cours précités a déjà été suivi dans le cadre de la licence en géologie, ce cours pourra être remplacé par un autre enseignement moyennant accord du Président du Conseil des Etudes.