

#### Block 1

Further Informations

#### Optional courses

##### Liege - Levelling and Introductory Courses

Choose 6 courses out of the following :

##### Characterization

GEOL0020-7	<i>Mineral resources</i> (english language) - Eric PIRARD - [1d FW, 26h Labo., 32h Proj.]	Q1	26	-	[+]	<b>5</b>
GEOL0312-1	<i>Process mineralogy</i> (english language) - Hassan BOUZAHZAH, Eric PIRARD - [25h Labo., 15h Proj.]	Q1	25	-	[+]	<b>5</b>

##### Processing

GEOL0314-1	<i>Mineral processing I - basics</i> (english language) - Stoyan GAYDARDZHIEV - [30h Labo., 10h Proj., 1,5d FW]	Q1	30	-	[+]	<b>5</b>
GEOL0315-1	<i>Solid Waste and by products processing</i> (english language) - Stoyan GAYDARDZHIEV - [20h Labo., 7h Proj., 1,5d FW]	Q1	20	-	[+]	<b>5</b>

##### Modelling

MATH0006-3	<i>Introduction to numerical analysis</i> (english language) - Quentin LOUVEAUX	Q1	20	20	-	<b>5</b>
GEOL0097-2	<i>Geostatistics</i> (english language) - Eric PIRARD - [30h Labo.]	Q1	30	-	[+]	<b>5</b>

##### Management

GEOL1045-1	<i>Economic and societal issues in mining and recycling</i> (english language) - Eric PIRARD - [30h Proj., 2d FW]	Q1	15	-	[+]	<b>5</b>
GEOL0237-2	<i>Exploitation of mineral deposits</i> (english language) - Nicolas VASBINDER - [2d FW]	Q1	25	15	[+]	<b>5</b>

#### Compulsory courses

##### Nancy - Basic Courses

##### Characterization

HULG0417-1	<i>Advanced characterization of mineral surfaces/water interface</i> (english language) - N...	Q2	35	10	-	<b>5</b>
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##### Processing

HULG0418-1	<i>Case study of ore processing</i> (english language) - N...	Q2	10	40	-	<b>5</b>
HULG0419-1	<i>Advanced mineral processing</i> (english language) - N...	Q2	57	18	-	<b>8</b>

##### Modelling

HULG0421-1	<i>Resources modelling and evaluation</i> (english language) - N...	Q2	25	25	-	<b>5</b>
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##### Management

HULG9270-1	<i>Management of resources</i> (english language) - N...	Q2	25	25	-	<b>5</b>
HULG9342-1	<i>Exploitation of mineral raw materials and environmental impact of mining</i> (english language)	Q2	9	16	-	<b>2</b>

#### Block 2

#### Optional courses

# Study programmes 2023-2024

## Faculty of Applied Sciences

### Master of Science (MSc) in Geological and Mining Engineering, professional focus in geometallurgy (EMERALD) (Erasmus mundus)

Choose one module from :

#### Lulea - Advanced Courses

##### Characterization

HULG0423-1	<i>Mining geology</i> (english language) - N...	Q1	45	30	-	<b>7,5</b>
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##### Processing

HULG0424-1	<i>Mineral processing II</i> (english language) - N...	Q1	45	30	-	<b>7,5</b>
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##### Modelling

HULG0426-1	<i>Geometallurgy</i> (english language) - N...	Q1	46	20	-	<b>7,5</b>
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Choose one of the following courses :

HULG0425-1	<i>Simulation of mineral processing</i> (english language) - N...	Q1	40	35	-	<b>7,5</b>
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HULG9143-1	<i>Senior Design Project in Mineral processing</i> (english language)	Q1	-	-	-	<b>7,5</b>
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#### Freiberg - Advanced Courses

*Notice : this course list is for students enrolled in Block 1 of the master's degree in 2018-2019.*

##### Processing

HULG9343-1	<i>Project-Process Design Mineral Processing/Recycling</i> (english language)	Q1	15	90	-	<b>8</b>
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HULG9383-1	<i>Selective Separation of Strategic Elements</i> (english language)	Q1	30	30	-	<b>5</b>
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HULG9384-1	<i>Thermodynamics and Heat Transfer</i> (english language)	Q1	15	30	-	<b>4</b>
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HULG9385-1	<i>Practice of secondary raw materials</i> (english language)	Q1	15	60	-	<b>4</b>
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##### Management

HULG9386-1	<i>Resource Management</i> (english language)	Q1	30	30	-	<b>6</b>
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Choose one of the following courses :

HULG9387-1	<i>Simulation of sustainable nonferrous metallurgical process systems</i> (english language)	Q1	30	-	-	<b>6</b>
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HULG9388-1	<i>Mineral Liberation Analysis of Mineral Resources</i> (english language)	Q1	30	-	-	<b>3</b>
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#### Compulsory courses

##### Freiberg or Lulea or Nancy or Liege - Master Thesis

ASTG0113-1	<i>Internship with one of the associate industrial partners</i> (english language) - N...	Q2	-	-	-	<b>5</b>
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ATFE0020-1	<i>Master thesis</i> (english language) - N...	Q2	-	-	-	<b>25</b>
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