

Bachelor in Geology

The program consists of 1/3 of lectures on theory and modeling, 1/3 of practical training in the laboratory and 1/3 of fieldwork. It will allow one to **study the major phenomena related to geology**, from plate tectonics to interactions between geosphere, hydrosphere, atmosphere and biosphere. The techniques implemented cover all tools of the geologist, such as geological mapping, field sampling and laboratory analysis or global modeling of the functioning of our planet. An important component of the curriculum is also dedicated to geo-materials in its microscopic as well as macroscopic organization.

The lectures are accompanied by practical work conducted in the laboratory. They will help acquire specialized training in modern analytical methods in areas such as **geochemistry, optical and electron microscopy, crystallography, petrography of the rocks and computer modeling**

After his/her BA, if he/she wishes to move towards other MA, the student can orient himself/herself in areas such as geophysics, coastal planning, environmental management and hydrogeology. The student can also be directed towards research in volcanology, oceanography and environmental geochemistry.

Bloc 1 | BA-GEOL























Cours obligatoires

BIOL-F102	Biologie générale Patrick MARDULYN (Coordinator) and Etienne MEYLAN ⌚ 5 credits [lecture: 48h] 📅 second term 🗨️ French
CHIM-F101	Chimie générale François RENIERS (Coordinator), Laurence RONGY and Thierry VISART DE BOCARME ⌚ 20 credits [lecture: 96h, tutorial classes: 60h, practical work: 84h, project: 75h] 📅 first and second terms 🗨️ French
ENVI-F1001	Sciences de la Terre, Environnement et Société Pierre REGNIER (Coordinator), Jean-Michel DECROLY and Frank PATTYN ⌚ 5 credits [lecture: 48h, field trips: 12h] 📅 first and second terms 🗨️ French
GEOL-F104	Les temps géologiques : concepts et méthodes Sandra ARNDT (Coordinator) and Goulven Gildas LARUELLE ⌚ 5 credits [lecture: 24h, practical work: 24h] 📅 second term 🗨️ French
GEOL-F105	Géologie de l'Europe Vinciane DEBAILLE (Coordinator) and Steeve BONNEVILLE ⌚ 5 credits [lecture: 16h, field trips: 16h] 📅 second term 🗨️ French
MATH-F119	Mathématiques Dimitri LEEMANS (Coordinator) and Antoine GLORIA ⌚ 10 credits [lecture: 60h, tutorial classes: 60h] 📅 first and second terms 🗨️ French
PHYS-F104	Physique 1 Barbara CLERBAUX (Coordinator), Sébastien CLESSE and Michele SFERRAZZA ⌚ 10 credits [lecture: 72h, tutorial classes: 36h] 📅 first and second terms 🗨️ French

Bachelor in Geology

Bloc 2 | BA-GEOL

Cours obligatoires

- GEOG-F102 **Géomorphologie structurale et dynamique** | Frank PATTYN (Coordinator)
 5 credits [lecture: 20h, practical work: 24h, field trips: 8h, project: 10h]  second term  French
- GEOG-F2001 **Introduction à la minéralogie et à la pédologie** | Steeve BONNEVILLE (Coordinator) and Thomas DROUET DE LA THIBAUDERIE
 5 credits [lecture: 28h, practical work: 12h, field trips: 8h]  first term  French
- GEOG-F202 **Eléments de cartographie géologique et de géologie structurale** | Sandra ARNDT (Coordinator)
 5 credits [lecture: 12h, practical work: 24h, field trips: 16h]  first term  French
- GEOG-F204 **Sédimentologie** | Xavier DEVLEESCHOUWER (Coordinator)
 5 credits [lecture: 24h, practical work: 12h, field trips: 24h]  second term  French
- GEOG-F205 **Thermodynamique appliquée à la géologie** | Sandra ARNDT (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h]  first term  French
- GEOG-F211 **Introduction à la pétrologie** | Nadine MATTIELLI (Coordinator)
 5 credits [lecture: 12h, practical work: 34h, field trips: 8h]  second term  French
- GEOG-F301 **Minéralogie** | Karen FONTIJN (Coordinator)
 5 credits [lecture: 24h, practical work: 26h]  first term  French
- INFO-F206 **Informatique** | Olivier MARKOWITCH (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h, project: 12h]  first term  French
- LANG-F201 **Anglais scientifique I** | Alexander CORNFORD (Coordinator)
 5 credits [tutorial classes: 48h]  second term  English
- MATH-F115 **Mathématiques 2** | Ignace LORIS (Coordinator)
 5 credits [lecture: 30h, tutorial classes: 24h]  second term  French
- PHYS-F205 **Physique 2** | Michel TYTGAT (Coordinator) and Michele SFERRAZZA
 5 credits [lecture: 24h, tutorial classes: 16h, practical work: 20h]  first term  French

Cours optionnels

A total of five credits chosen from the following























- BIOL-F201 **Evolution et diversité des eucaryotes : botanique** | Pierre Jacques MEERTS (Coordinator)
 (optional) 5 credits [lecture: 42h, practical work: 12h]  first and second terms  French
- CHIM-F201 **Chimie analytique 1** | Thomas DONEUX (Coordinator)
 (optional) 5 credits [lecture: 24h, practical work: 36h, project: 12h]  first term  French
- ETHI-F201 **Sciences, éthique, histoire et société** | Grégoire Wallenborn (Coordinator) and Eric MURAILLE
 (optional) 5 credits [lecture: 48h]  second term  French
- ETHI-F301 **Science et Société : analyse de controverses scientifiques** | Patrick MARDULYN (Coordinator) and Grégoire Wallenborn
 (optional) 5 credits [lecture: 24h, project: 70h]  first term  French

- GEOG-F103
(optional) **Fondements de la géographie humaine** | Jean-Michel DECROLY (Coordinator)
⌚ 5 credits [lecture: 36h, project: 20h] 📅 second term 🗨 French
- GEOG-F203
(optional) **Climatologie et glaciologie** | Frank PATTYN (Coordinator)
⌚ 5 credits [lecture: 24h, practical work: 24h, project: 10h] 📅 second term 🗨 French
- GEOG-F210
(optional) **Géographie de l'Europe** | Gilles VAN HAMME (Coordinator)
⌚ 5 credits [lecture: 24h] 📅 second term 🗨 French
- GEOG-S101
(optional) **Géographie économique** | Gilles VAN HAMME (Coordinator)
⌚ 5 credits [lecture: 48h] 📅 second term 🗨 French
- PHYS-F105
(optional) **La structure de l'univers** | Alain JORISSEN (Coordinator) and Rodrigo ALVAREZ
⌚ 5 credits [lecture: 48h] 📅 first term 🗨 French
- TRAN-F201
(optional) **Introduction aux enjeux de la durabilité** | Wouter ACHTEN (Coordinator), Chiara ARMENI and Emilie JEMPA KANKO MUTOMBO
⌚ 5 credits [lecture: 24h, project: 24h] 📅 second term 🗨 French

Bachelor in Geology

Bloc 3 | BA-GEOL

Cours obligatoires

- GEOL-F3001 **Levés cartographiques et géologie de la Belgique** | Steeve BONNEVILLE (Coordinator)
 5 credits [field trips: 54h]  second term  French
- GEOL-F304 **Micropaléontologie et microfaciès** | Xavier DEVLEESCHOUWER (Coordinator)
 5 credits [lecture: 20h, practical work: 24h, field trips: 16h]  second term  French
- GEOL-F305 **Géodynamique et Pétrologie Magmatique et Métamorphique** | Nadine MATTIELLI (Coordinator)
 10 credits [lecture: 24h, practical work: 60h, field trips: 60h]  first and second terms  French
- GEOL-F306 **Cristallographie et Minéralogie Appliquée** | Karen FONTIJN (Coordinator)
 5 credits [lecture: 12h, practical work: 34h, project: 20h]  second term  French
- GEOL-F307 **Cycle de la matière et de l'énergie dans les systèmes géologiques** | Pierre REGNIER (Coordinator) and Steeve BONNEVILLE
 5 credits [lecture: 36h, tutorial classes: 24h]  second term  French
- GEOL-F309 **Géophysique et tectonophysique** | Corentin CAUDRON (Coordinator), Thomas LECOCQ and Frank PATTYN
 5 credits [lecture: 26h, tutorial classes: 12h, field trips: 16h]  first term  French
- GEOL-F312 **Projet de recherche et communication scientifique** | Sandra ARNDT (Coordinator) and Karen FONTIJN
 5 credits [lecture: 10h, project: 50h]  first and second terms  French
- GEOL-F319 **Introduction à la métallogénie et industrie minérale** | Johan YANS (Coordinator)
 5 credits [lecture: 12h, practical work: 24h, field trips: 8h]  second term  French
- GEOL-F427 **Géologie structurale**
 5 credits [lecture: 24h, field trips: 24h, project: 12h]  first term  French
- LANG-F301 **Anglais scientifique II** | Hugh MURPHY (Coordinator) and Alexander CORNFORD
 5 credits [tutorial classes: 48h]  first term  English
- MATH-F316 **Biogéostatistiques** | Thomas VERDEBOUT (Coordinator)
 5 credits [lecture: 30h, tutorial classes: 24h]  second term  French