


 Faculty of Applied Sciences

**AUCE1171 Geology and mineralogy**

[25h+15h exercises] 3 credits

This course is taught in the 2nd semester

**Teacher(s):** Christian Schroeder, Philippe Sonnet  
**Language:** French  
**Level:** First cycle

### Aims

Basic elements of geology and mineralogy

### Main themes

Scope of the activity (main topics)

Definition of the structure of the Earth and of the geological phenomenon to be taken into account for civil engineering works

### Content and teaching methods

Earth structure, Crystals, Minerals, Rocks : igneous, sedimentary and metamorphic, Geological cycle, Stratigraphy, Tectonics, foldings, faults. Weathering, creep, slopes, Erosion and sedimentation, volcanoes, earthquakes.

Hydrogeology, karst.

Geology of Belgium

Survey methods, geophysical prospecting for geological studies.

Case studies, application of geology to: dams, tunnels, underground openings, foundations, highways, harbours, land use.

Practical works :

Minerals and rocks, geological maps, study of practical cases (dams, tunnels, water resources)

### Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

1-Possibility to have examination in english

### Other credits in programs

<b>ARCH12BA</b>	Deuxième année de bachelier en sciences de l'ingénieur, orientation ingénieur civil architecte	(3 credits)	Mandatory
<b>FSA12BA</b>	Deuxième année de bachelier en sciences de l'ingénieur, orientation ingénieur civil	(3 credits)	Mandatory