


 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

ARCH12BA	Deuxième année de bachelier en sciences de l'ingénieur, orientation ingénieur civil architecte	(3 credits)
ARCH22	Deuxième année du programme conduisant au grade d'ingénieur civil architecte	(3 credits)
FSA12BA	Deuxième année de bachelier en sciences de l'ingénieur, orientation ingénieur civil	(3 credits)
FSA13BA	Troisième année de bachelier en sciences de l'ingénieur, orientation ingénieur civil	(3 credits)
GC22	Deuxième année du programme conduisant au grade d'ingénieur civil des constructions	(3 credits)
MECA23	Troisième année du programme conduisant au grade d'ingénieur civil mécanicien	(3 credits)