

## Faculty of Applied Sciences



### AUCE1172 Soil mechanics

[25h+22.5h exercises] 4 credits

This course is taught in the 1st semester

**Teacher(s):** Jacques De Jaeger, Alain Holeyman, Jean-François Thimus (coord.)  
**Language:** French  
**Level:** First cycle

#### Aims

To provide to future architects and civil engineers fundamentals of soil physics and of soil mechanical behavior

#### Main themes

Soil physics, classification and behavior

#### Content and teaching methods

- Definitions, chemical and physical properties, grain size analysis, phase relations, consistency indices and Atterberg limits, classification
- Effective stress concept, effect of water at rest and of water seepage, permeability
- Mechanical characteristics, stress-strain relation, shear strength
- Water seepage through soils : fundamentals, Laplace equation, boundary conditions, flow net determination, , drainage, geotextiles

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

Pedagogy : lectures, elementary exercises

Examination : written (exercise), oral (theory)

#### Other credits in programs

<b>ARCH13BA</b>	Troisième année de bachelier en sciences de l'ingénieur, orientation ingénieur civil architecte	(4 credits)	Mandatory
<b>FSA12BA</b>	Deuxième année de bachelier en sciences de l'ingénieur, orientation ingénieur civil	(4 credits)	
<b>FSA13BA</b>	Troisième année de bachelier en sciences de l'ingénieur, orientation ingénieur civil	(4 credits)	
<b>GC22</b>	Deuxième année du programme conduisant au grade d'ingénieur civil des constructions	(4 credits)	