UCL Université catholique de Louvain

LAUCE1173

2012-2013

Applied soil mechanics

5.0 credits	30.0 h + 30.0 h	2q

Teacher(s) :	Holeyman Alain ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	Presentation of construction methods with emphasis on selection criteria
Aims :	Basis course introducing to future architects and civil engineers the methods of analysis and design of foundations, earth retaining structure and slopes *The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".*
Content :	- Earth pressure : active, at rest and passive states, Rankine and Coulomb theories (including Culhman method) - Shallow foundations : stress distribution (Boussinesq, Newmark, Steinbrenner-Fadum), settlement analysis, sources of differential settlement. - Spread footings : ultimate loads, standard equation of bearing capacity, generalization - In-situ testing. - Deep foundations : bearing capacity of an isolated vertical pile. Foundation technology, execution procedure, piles and sheet piles, anchors - Retaining walls : principles, stability criteria for gravity and cantilever retaining walls - Slurry walls and sheet piles : general principles, technologies, assumptions, analysis and design elements, analytical design of a cantilever sheet pile, discussion. - Slope stability : principles, case of homogeneous dry soil (Taylor's method), general principle of digital analysis.
Other infos :	Pedagogy : lectures, elementary exercises Examination : written (exercise), oral (theory)
Cycle and year of study :	> Bachelor in Engineering > Bachelor in Engineering > Bachelor in Engineering : Architecture
Faculty or entity in charge:	GC