





3.00 credits

30.0 h

Q2

Teacher(s)	Baret Philippe ;Defourny Pierre ;Delmelle Pierre ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	The course proceeds from actual stakes related to the biological, agronomical and environmental engineering and will approach the following themes: - the bio-geochemical cycles of the biosphere (water, carbon, nitrogen); energetic flows. - notions of bio-climatology, classification of climates, climatic indicators. - basic notions of ecosystems (biotopes and biocenoses, trophic chains); food chains; production and productivity. - sustainable development; notions of equilibrium and imbalance; notions of vulnerability; biodiversity and the conservation problematic; pollution and traceability problems. - role of the soil as a reactor in the functioning of ecosystems: water and mineral elements storage, alteration and acidification; notions of resilience, mobility of biogenic elements and bio-pedological cycles; storage and mobility of contaminants. - impact of the human being on the functioning of the ecosystems and on the soil.
Learning outcomes	
Content	The basic principles will be taught by means of concrete examples related to the biosphere engineering. For example: starting from the human nutrition seen globally, different concepts will be taught: trophic and food chains, energetic flows, productivity, bio-geochemical cycles (water, carbon, nitrogen), functions of the soil compartment such as storage, mineral supply... The learning process will be based on a problem-approach, where the basic concepts are acquired through an analysis of the stakes and a perspective view of the concepts.
Faculty or entity in charge	AGRO

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Anthropology	ANTR2M	3		
Minor in Development and Environment	MINDENV	3		
Additional module in Biology	APPBIOL	3		
Minor : Issues of Transition and Sustainable Development	MINDD	5		
Master [120] en urbanisme et développement territorial	URBA2M	3		