UCL Université catholique de Louvain

LBIRF2104B

2013-2014

Diagnostic stationnel et cycles biogéochimiques

2.0 credits	

Teacher(s) :	
Language :	Français
Place of the course	Louvain-la-Neuve
Prerequisites :	Precursory courses: Introductory course in silviculture (for part B), ecology, plant physiology, botanics, plant taxonomy, plant systematics (field surveys) and soil science. Supplemental courses: Silviculture, forest mensuration, forest management and planning, wildlife ecology and management.
Main themes :	- techniques of vegetation analysis: concepts and principles of plant sociology, methods of vegetation surveys and multivariate analyses of vegetation releves, influence of agro-forestry-pastoral ancestral practices on current vegetation; - determinants of plant assemblages and vegetation dynamics, vegetation mapping; - phytogeography, plant ecology and indicator value of species; - plant demography, reproduction, dispersal; - productivity and fluxes in forest ecosystems: energy, light, water, nutrients, carbon; - site assessment: risks, constraints and potentialities; - stability of forest ecosystems (case study): understanding of the issues, design of integrated protection strategies.
Aims :	Learning Outcomes M1.1, M1.2, M1.3, M1.4, M1.5, M2.1, M2.2, M2.3, M2.4, M2.5, M3.2;, M3.4, M3.5, M3.7, M3.8, M4.1, M4.2, M4.3, M4.7, M6.2, M6.4, M6.5, M6.6, M6.7, M6.8, M7.1. At the end of this activity, the student is able to: - identify the different plant species, realize vegetation surveys (Braun-Blanquet method or transect) and determine the forest type and origin in relation with soil and biogeography constraints; - analyse vegetation surveys with adequate statistics, realize a synthetic table, defend and argument its choices and vegetation types; - integrate vegetation type and history, sylvo-agro practices, biogeography and climate to propose habitat management; - understand the basics of site assessment; - use the range of tools available for site characterization (e.g. phytosociology, afforestation guides, ...) for proper management; - understand the regulation of flows (energy, light, water, nutrients, carbon) in forest ecosystems by integrating theoretical and practical examples presented in this course, in order to derive (i) the impact of forests on the environment and (ii) appropriate management options; - consider abiotic risks in forest management by controlling the underlying processes and integrating the concepts of forest multifunctionality, in order to minimize the impacts of these hazards on forests ecosystems with a long-term vision. *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".*
Cycle and year of study :	> Master [60] in Biology
Faculty or entity in charge:	AGRO