UCL Université catholique de Louvain

LBIRF2202

2013-2014

Aménagement des formations forestières tempérées et tropicales

6.0 credits	45.0 h + 15.0 h	1q

Teacher(s) :	Farcy Christine ; Gourlet Sylvie ; Ponette Quentin (coordinator) ;
Language :	Français
Place of the course	Louvain-la-Neuve
Inline resources:	iCampus
Prerequisites :	Prerequisites: geomatics, ecology, silviculture, forest mensuration, forest economics and policy, management of habitats and species. Supplementary courses: environmental law, land planning.
Main themes :	1. Main concepts: - basic concepts of forest management: time, space, optimal felling ages/dimensions, normal forests, annual allowable cut; - steps in forest management: analysis, synthesis, implementation, follow-up/monitoring; - specification of forest management based on the type of society (forest, agricultural, industrial, post-industrial); - key management methods in temperate zones: uniform systems, selection system, irregular stands, conversion and transformation; - taking into account the production of social and environmental services (biodiversity, landscape, public hosting, ...); - development and management of forest formations in warm regions: tropical rainforests, other forest biomes, plantations, agro-forests and trees outside forests, analysis of context, approaches and techniques of planning and management, cross-cutting themes. The concepts related to the management of temperate forests are implemented in the companion course entitled 'Integrated project in forest and open habitat planning' LBIRF2212.
Aims :	a. Contribution de l'activité au référentiel AA (AA du programme) M1.1, M1.2, M1.4, M1.5, M2.1, M2.2, M2.4, M6.1, M6.2, M6.4, M6.9, M8.5 b. Formulation spécifique pour cette activité des AA du programme (maximum 10) At the end of the course, students will have acquired the skills to: - master the concepts and methods involved in the different steps associated with the planning process of forests located in temperate and tropical regions - analysis, synthesis, implementation, follow-up; - select, analyze and synthesize data from diverse disciplines such as resource assessment, management, analysis of social and environmental impacts, etc.; - establish management plans at the forest ownership scale, integrating the constraints, risks and opportunities from various fields and stakeholders; - develop sound management decisions for tropical ecosystems, based on a deep understanding of their ecology and issues associated with them. *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".*
Evaluation methods :	- written examination; - evaluation of the presentations given by the students.
Teaching methods :	- lectures including practical examples, case studies and active learning mini-activities; - seminars by stakeholders from the socio-professional and scientific spheres; - thematic presentations by teams of students, with discussions and feedback; - supervised analysis of a management plan of a public forest; - one-day trip in a managed public forest.
Content :	A. Table of contents 1. Management and planning of temperate forests - context - management steps general approach analysis synthesis implementation follow-up/monitoring - main management concepts space-related concepts

	time-related concepts other concepts - silvicultural systems, silvicultural treatments et optimal felling age/dimension general approach typology of silvicultural treatments and management methods determination of optimal felling ages and dimensions - management of evenaged forests normal forest regeneration cuttings and regeneration effort groups allowable cuts - management of irregular / unevenaged forests particularities normal forest allowable cuts follow-up and control conditions of application - multifunctional role of forests historical context legal context institutional context history of management methods relations between forestry and agriculture forest and biodiversity (Natura 2000) urban and suburban forest forest and tourism forest and water forest and landscape forest and human health forest and ethics 2. Management and planning of tropical forests - Tropical rainforests (TRF) distribution, origin and main characteristics; major issues (environmental, social, economic); sustainable management of TRF; demographic processes at work: definition, methods of study, knowledge, challenges; forest dynamics models: valuable tools in thinking and decision-making; from local study to global understanding, how to help the decision makers? - Tropical forest ecosystems (excluding natural forests) forest plantations dry forests agro-forests trees outside forests - Cross-cutting themes problematics of wood energy land planning, participatory management relationships between agriculture and forestry sustainable management tools problematics of carbon and payments for environmental services prospective on forest ecosystems B. Additional information This course is organized in the form of three interconnected modules: - module 1 (22.5 h). Forest management in temperate zones: theoretical courses and seminars; - module 2 (15 h). Forest management in temperate zones: case study - critical analysis of forest management plans, field visits; - module 3 (22.5 h). Forest planning and management in warm regions: lectures and seminars.
Bibliography :	- compulsory material for the course (power point slides, transparencies, reference documents) are made available to the students on iCampus. - for more information, students may usefully consult the following references: de Turckheim, B., Bruciamacchie, M. 2005. La futaie irrégulière. Théorie et pratique de la sylviculture irrégulière, continue et proche de la nature. Edisud, Aix-en-Provence, France, 286 p. Dubourdieu, J. 1997. Manuel d'aménagement forestier. Gestion durable et intégrée des écosystèmes forestiers. Lavoisier Tec& mp;Doc, Paris, France, 243 p. Linot, M., Nicot, P. 2009. Manuel paysager pour la forêt comtoise. CRPF, ONF (CDROM). Moigneu, T. 2005. Gérer les forêts périurbaines. Office National des Forêts, Fontainebleau, France, 414 p.
Cycle and year of study :	> Master [120] in Forests and Natural Areas Engineering
Faculty or entity in charge:	AGRO