

4.0 credits	30.0 h + 30.0 h	1q
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Teacher(s) :	Ponette Quentin ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	<ul style="list-style-type: none"> - Context, guidelines and constraints: time and returns on investments, ownership issues, stand and ecosystem stability, wood quality; - Evenaged monospecific stands: establishment, education, growth, regeneration; - Complex stands: conversion and transformation, selection system, irregular and mixed-species stands; - Dendrology: identification and ecology of the major tree species used for silviculture in Temperate Europe; - Applied silviculture: design of silvicultural programmes according to species (biological and ecological traits, market outlets), site conditions, and technico-economical context.
Aims :	<p>This course gives the necessary knowledge, competences, and tools to establish, maintain and transform forest stands of contrasted structures and composition, so as to deal with an array of objectives.</p> <p><i>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".</i></p>
Content :	<p>This course is made of five interconnected modules.</p> <p>Module 1: Lectures (theoretical courses and seminars on more applied themes) - 14 2-hour sessions dealing with the establishment, maintenance and transformation of forest stands of contrasted structures and composition;</p> <p>Module 2: Field excursions - 3 one-day excursions about stand regeneration, silvicultures of broadleaved trees and silvicultures of coniferous tree species;</p> <p>Module 3: Tree marking - learning exercise in an irregular forest stands with a computer-aided system;</p> <p>Module 4: Project - Establishment of evenaged monospecific stands through planting or natural regeneration;</p> <p>Module 5: Dendrology - 5 4-hour lab sessions and one half-day excursion in an arboretum to identify and learn the main ecological traits of the major tree species (gymnosperms, angiosperms) used for silviculture in temperate Europe.</p>
Other infos :	<p>Precursory courses : Introductory course in silviculture, ecology, plant physiology, botanics, plant taxonomy.</p> <p>Supplemental courses : Forest economics, wood science, forest mensuration, forest management and planning, field trip.</p> <p>Evaluation : Oral and written examination, report based on the personal work</p> <p>Support : Lecture notes, slides, web (http://www.biologievegetale.be), web site icampus.</p> <p>Recommended readings : Balleux, P., Van Lerberghe, P., 2006. Guide technique pour des travaux forestiers de qualité. Ministère de la Région Wallonne, DGRNE-DNF, Fiche technique n°17. Namur, Belgique, 373 p.</p> <p>Nyland, R.D., 2002. Silviculture : concepts and applications. 2nd ed. McGraw-Hill, USA, 682 p.</p> <p>Schütz, J.-P., 1990. Sylviculture 1. Principes d'éducation des forêts. Presses polytechniques et universitaires romandes, Lausanne, Suisse, 243 p.</p> <p>Schütz, J.-P., 1997. Sylviculture 2. La gestion des forêts irrégulières et mélangées. Presses polytechniques et universitaires romandes, Lausanne, Suisse, 178 p.</p> <p>Smith, D.M., Larson, B.C., Kelty, M.J., Ashton, P.M.S. 1996. The practice of silviculture: applied forest ecology. 9th ed. John Wiley & Sons, New York, USA</p> <p>Teaching team : Professor and invited speakers for lectures; Professor, assistant and technician for field excursions and labs.</p> <p>Miscellaneous : Modules 1 to 4 constitute a 4-credit elective course entitled 'Silviculture and dendrology, partim silviculture' for students of option S5E (Land development) within the master in environmental bioengineering.</p>
Cycle and year of study :	> Master [120] in Environmental Bioengineering
Faculty or entity in charge:	AGRO