




3 credits

30.0 h + 15.0 h

Q2

Teacher(s)	Ponette Quentin coordinator ; Vincke Caroline ;
Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	<i>The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.</i>
Aims	<p>a. <u>Contribution de l'activité au référentiel AA (AA du programme)</u> Cohérence des AA cours en regard de ceux du programme B1.1., B1.3., B1.4., B1.5., B2.1., B2.3., B3.1., B3.3., B3.5., B3.7., B6.2., B6.5.</p> <p>b. <u>Formulation spécifique pour cette activité des AA du programme (maximum 10)</u> At the end of this course, the student:</p> <ul style="list-style-type: none"> - understands the specifics of forest ecosystems and of their management; - understands the functions and issues related to forests, in a variety of bio-climatic and socio-economic contexts; - has the basics (vocabulary, methods, tools) needed to characterize forests (at the 'tree', 'stand', and 'ecosystem' levels; in both static and dynamic ways) and management methods; - understands the main processes that regulate forest dynamics at the 'tree', 'stand' and 'ecosystem' levels, in natural conditions or under management; - knows the cropping objectives associated with forest management as well as the silvicultural interventions implemented to meet them in the main temperate silvicultural systems (even-aged high forest, selection system, coppice and coppice with standards); - is able to anticipate the impact of management actions on forests at the 'tree', 'stand' and 'ecosystem' levels; - is able to analyse a forests site and a stand, and based on this, to establish basic management recommendations. <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>
Evaluation methods	Written exam with short answers, oral examination focusing on a theoretical development, oral presentation (thematic research), written report (integrated project).
Teaching methods	Lectures with active learning mini-activities and real-life examples, presentations given by stakeholders in the socio-professional world, oral presentations given by teams of students on a forest related issue with feedback, integrated small-scale project, one-day field trip in public forests.
Content	Part I. Forests - definitions - diversity of forests over space - diversity of forests over time - humans and forests Partie II. Trees - definitions - morphology and growth - effects of environmental factors on tree Partie III. Forest dynamics - successions - disturbances - site availability and opening of gaps - colonization and installation - biotic interactions - species strategies - silvigeneses Partie IV. Silvicultures - context

	<ul style="list-style-type: none"> - silvicultural systems - cropping objectives and silvicultural interventions
Bibliography	<ul style="list-style-type: none"> - Notes de cours : support .ppt sur iCampus - Supports additionnels sur iCampus - Lectures conseillées : <p>Barnes, B.V., Zak, D.R., Denton, S.R., Spurr, S.H., 1998. Forest ecology. 4th Ed. John Wiley & Sons, New York, USA, 774 p ;</p> <p>Kimmins, J.-P., 1997. Forest ecology. A foundation for sustainable management. 2nd Ed. Prentice Hall, Upper Saddle River, USA, 596 p. ;</p> <p>Nyland, R.D., 2002. Silviculture : concepts and applications. 2nd Ed. McGraw-Hill, USA, 682 p. ;</p> <p>Oliver, C.D., Larson, B.C., 1996. Forest stand dynamics. Update Ed. John Wiley & Sons, New York, 520 p. ;</p> <p>Sands, R., 2005. Forestry in a global context. CABI Publishing, Wallingford, UK, 262 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., 1986. The practice of silviculture. 8th Ed. John Wiley & Sons, New York, U.S.A., 527 p.</p>
Faculty or entity in charge	AGRO

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Biology of Organisms and Ecology	BOE2M	3		
Bachelor in Bioengineering	BIR1BA	3	LBIR1251	
Minor in Scientific Culture	LCUSC100I	3		
Minor in Development and Environment	LDENV100I	3		