

Due to the COVID-19 crisis, the information below is subject to change, in particular that concerning the teaching mode (presential, distance or in a comodal or hybrid format).




3 credits

22.5 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	<p>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</p> <ul style="list-style-type: none"> - Written exam with short answers - Written report related to the description and analysis of a forest stand
Teaching methods	<p>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</p> <ul style="list-style-type: none"> - Lectures with active learning mini-activities and real-life examples - Presentations given by stakeholders in the socio-professional world - Integrated small-scale group project (basic stand description and analysis), with feedback in the field - One-day field trip in public forests.
Content	<p>Part I. Forests</p> <ul style="list-style-type: none"> - definitions - diversity of forests over space - diversity of forests over time - humans and forests <p>Partie II. Trees</p> <ul style="list-style-type: none"> - definitions - morphology and growth - effects of environmental factors on tree <p>Partie III. Forest dynamics</p> <ul style="list-style-type: none"> - solar radiation and forests - successions

	<ul style="list-style-type: none"> - disturbances - site availability and opening of gaps - colonization and installation - biotic interactions - species strategies - silvigeneses: single-cohort vs multicohort stands <p>Partie IV. Silvicultures</p> <ul style="list-style-type: none"> - context - silvicultural systems - cropping objectives and silvicultural interventions
<p>Bibliography</p>	<p>Les supports de cours obligatoires (diapositives power point, documents de référence) sont mis à disposition de l'étudiant sur Moodle.</p> <p>Pour en savoir plus, l'étudiant pourra consulter utilement les ouvrages de référence suivants :</p> <ul style="list-style-type: none"> - 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 ; - Chapin III, F.S., Matson, P.A., Vitousek, P. 2011. Principles of Terrestrial Ecosystem Ecology. Springer-Verlag, New York ; - Kimmins, J.P. 2004. Forest ecology. A foundation for sustainable forest management and environmental ethics in forestry. 3rd edition. Prentice Hall, Upper Saddle River, USA, 611 p. + annexes ; - Nyland, R.D., 2002. Silviculture: concepts and applications. 2nd Ed. McGraw-Hill, USA, 682 p. ; - Oliver, C.D., Larson, B.C., 1996. Forest stand dynamics. Updated Ed. John Wiley & Sons, New York, 520 p. ; - Sands, R., 2005. Forestry in a global context. CABI Publishing, Wallingford, UK, 262 p. ; - Schütz, J.-P., 1990. Sylviculture 1. Principes d'éducation des forêts. Presses polytechniques et universitaires romandes, Lausanne, Suisse, 243 p. ; - Schütz, J.-P., 1997. Sylviculture 2. La gestion des forêts irrégulières et mélangées. Presses polytechniques et universitaires romandes, Lausanne, Suisse, 178 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>Faculty or entity in charge</p>	<p>AGRO</p>

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Minor in Development and Environment	MINDENV	3		
Master [120] in Biology of Organisms and Ecology	BOE2M	3		
Minor in Scientific Culture	MINCULTS	3		
Bachelor in Bioengineering	BIR1BA	3	LBIR1251 AND LBIR1270	