




3.00 credits

22.5 h + 15.0 h

Q2

Teacher(s)	Ponette Quentin (coordinator) ;Vincke Caroline ;
Language :	French > English-friendly
Place of the course	Louvain-la-Neuve
Learning outcomes	
Evaluation methods	<p>Participation in practical work and submission of reports are required for this course. In agreement with Article 72 of the General Regulations for Studies and Examinations, the lecturers may propose to the jury to oppose the registration for the examination of a student who has not complied with these obligations. In addition, class attendance is highly recommended.</p> <p>The assessment consists of two parts: (i) individual closed-book written exam with short answers, and (ii) written group report related to the characterization of a forest stand. If the mark of the written exam is $\geq 8/20$, the final mark is obtained by taking the weighted average of the written exam (70%) and the report (30%); otherwise, the final mark corresponds to the mark of the written exam. Participation in the quizzes is compulsory; failing to complete the quizzes on time, the final grade will be reduced by one point out of 20 per quiz not completed on time.</p>
Teaching methods	<ul style="list-style-type: none"> - Lectures with active learning mini-activities and real-life examples; - Quizzes allowing the gradual acquisition of essential notions, with feedback. The completion of the quizzes within the allotted time is compulsory, but the mark obtained in the test does not enter into the final mark; - Presentations given by stakeholders in the socio-professional world; - Integrated small-scale group project (basic stand description and analysis), with feedback in the field. Participation in group work and submission of the project are compulsory; - One-day field trip in public and/or private forests; presence at the excursion is compulsory.
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 - 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
Inline resources	Moodle

<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>Other infos</p>	<p>This course analyzes the different issues related to forests on a global scale, and explains how the methods for the sustainable management of forest ecosystems are based on the understanding of the processes active at the different scales of interest. This course is committed to transition and sustainable development.</p> <p>The course does not use any particular medium that would be charged and deemed mandatory. Paid books that may be recommended are optional.</p>
<p>Faculty or entity in charge</p>	<p>AGRO</p>

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