

5.0 credits	45.0 h + 7.5 h	2q
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Teacher(s) :	Vincke Caroline ;
Language :	Français
Place of the course	Louvain-la-Neuve
Inline resources:	iCampus
Prerequisites :	Introduction to silviculture, general ecology, Wood anatomy and properties.
Main themes :	<p>Forest engineering:</p> <ul style="list-style-type: none"> <li>- working methods of machines: advantages and constraints, calculating the profitability or productivity, soil and stands protection;</li> <li>- transport service: network designs for different purposes (operation, maintenance, ...), implementation criteria (profitability, landscape and environmental integration, ...), creation (specifications) and maintenance;</li> <li>- work planning, drafting of tenders and specifications, site organization;</li> </ul> <p>Wood technology:</p> <ul style="list-style-type: none"> <li>- technical implementation of wood as an engineering material: splitting, sawing, peeling, slicing, gluing, drying and preservation;</li> <li>- technical implementation of wood as a raw material for: panel manufacturing, paper, chemical processing of timber, fuelwood;</li> <li>- novel methods of improving the properties of wood, in particular modified by copolymerisation and heat treatment timber;</li> <li>- Environmental impacts of wood processing.</li> </ul>
Aims :	<p>Contribution de l'activité au référentiel AA (AA du programme)                  Ce cours contribue aux AA 1 (Maîtriser un corpus de « savoirs scientifiques » ; en particulier 1.1 à 1.4), 2 (Maîtriser un socle de « savoirs en ingénierie et en gestion » ; en particulier 2.1) et 4 (Concevoir et mettre en œuvre une démarche complète et innovante d'ingénieur ; en particulier 4.1) du programme BIRF.</p> <p>b. Formulation spécifique pour cette activité des AA du programme (maximum 10)                  At the end of this activity, the student is able to:</p> <ul style="list-style-type: none"> <li>- Select and plan appropriate forestry, integrating the technical, ecological and economic aspects introduced in order to ensure sustainable management of land and forest resources;</li> <li>- Understand and compare the methods and techniques of industrial use of wood as a material and raw material by integrating theoretical concepts underlying and presented during the course;</li> <li>- Develop a comprehensive and critical view of current issues in the timber industry by integrating environmental, technical and economic to sustainable management of the forest resource.</li> </ul> <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 :	The exam is based on issues that may be of "definition", or based on a theoretical development, targeted or transverse. Indeed, the ability to link the concepts of the different chapters is a learning outcome of the course.
Teaching methods :	The course takes the form of a lecture (requiring a face-to-student), accompanied by active learning mini-activities (guided and Review, recurring quiz) and concrete examples and news. According to the news and opportunities, guest speakers are participating in this course. An excursion is organized in business and on the ground. One day of the forest tour in Master 2 is focused on those topics.
Content :	<p>1. Table of content                  Refer to the list of topics above. The detailed table of contents of an academic year is given at the first class by the teacher.</p>
Bibliography :	<ul style="list-style-type: none"> <li>- slides of the course (PDF) are available on i-campus for the enrolled students</li> <li>- Reference books :                         <ul style="list-style-type: none"> <li>- Bary-Lenger et al., 1999, Transformation et industries du bois en Europe, Ed. du Perron, 557p.</li> <li>- Walker J.F.C., 1992, Primary wood processing ' principles and practice, Ed. Chapman and Hall, 595p.</li> </ul> </li> </ul>
Other infos :	This course can be given in English.
Faculty or entity in charge:	AGRO

<b>Programmes / formations proposant cette unité d'enseignement (UE)</b>				
Intitulé du programme	Sigle	Credits	Prerequis	Acquis d'apprentissage
Master [120] in Forests and Natural Areas Engineering	BIRF2M	5	-	