Syllabus

Course Description

Course Title	Wood anatomy and productive forestry
Course Code	42607
Course Title Additional	
Scientific-Disciplinary Sector	AGRI-03/B
Language	Italian
Degree Course	Professional Bachelor in Wood Technology
Other Degree Courses (Loaned)	
Lecturers	Prof. Enrico Tomelleri, Enrico.Tomelleri@unibz.it https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/academic-staff/person/38848
Teaching Assistant	
Semester	First semester
Course Year/s	2
CP	3
Teaching Hours	30
Lab Hours	0
Individual Study Hours	45
Planned Office Hours	9
Contents Summary	Productive Silviculture • Elements of forest management and the forest-wood supply chain Wood Anatomy • Basics of systematic forest botany • Microscopic and macroscopic characteristics of wood • Identification of woody species Wood Technology • Variations in wood structure • Defects, anomalies, and alterations of wood • Wood density and moisture content

	• Physical and mechanical properties • Wood assortments.
Course Topics	The objective of the course is to provide students with an adequate knowledge of the general scientific content related to the disciplines covered, as well as the acquisition of specific professional skills. Students are expected to acquire knowledge and competences in the macro- and microscopic identification of the main economically important wood species, their physical and technical characteristics, as well as elements of forest management and insights into the forest–wood supply chain.
Keywords	Productive silviculture; Forest management; Wood anatomy; Wood technology; Wood properties
Recommended Prerequisites	
Propaedeutic Courses	
Teaching Format	Frontal lectures
Mandatory Attendance	Recommended.
Specific Educational Objectives and Learning Outcomes	The course is part of the first year of the Bachelor in Wood Engineering and it is focused on the fields of wood technology. The aim of the course is to ensure an adequate scientific and professional knowledge of the topics that will be object of study. The students will acquire proper knowledge and competences on the identification of the main wood types, both from a macro- and microscopic point of view, on their physical and technical properties as well as on some basics of forest management. Knowledge and understanding Knowledge on the identification of woody species and on their technological characteristics. Knowledge and understanding of the functioning of the main wood production systems. Applying knowledge and understanding Integration and connection of the acquired knowledge in order to determine the characteristics related to wood quality and its use. Ability of linking such characteristics to the several wood production systems. Making judgements Critical evaluation of the factors affecting wood technological

	properties. Communication skills Ability of communicating the acquired knowledge with clear and proper scientific and technical language. Learning skills Ability of autonomously updating and expanding the scientific and technical knowledge acquired during the course.
Specific Educational Objectives and Learning Outcomes (additional info.)	
Assessment	Evaluation is based on a combination of oral/written exams, assignments, and/or student presentations.
Evaluation Criteria	The final evaluation will be related to the knowledge of the topics treated during the course, to the ability of summarizing and establishing connections between topics as well as to the language clarity and command.
Required Readings	Teaching resources, including PowerPoint presentations, provided by the lecturer during the course.
Supplementary Readings	Comparative Wood Anatomy https://doi.org/10.1007/978-3-662-04578-7 Springer Series in Wood Science (2001) Handbook of Wood Science and Technology https://doi.org/10.1007/978-3-030-81315-4 Springer Handbooks (2023)
Further Information	
Sustainable Development Goals (SDGs)	Life on land, Responsible consumption and production