

SYLLABUS

Name of the course (as specified in the approved curriculum) Properties of tropical wood species		Number of ECTS Credits 3
Name of the course in Polish Właściwości drewna gatunków tropikalnych		
Unit providing the course (Department/Institute) Department of Wood Science and Thermal Techniques		
Course leader Przemysław Mania, PhD		
Field of study Wood Technology	Level Engineer	Semester 2
TYPE OF CLASSES (course load)		
- Lectures		10
- Practical classes		15
- Contact hours		8
- Self-study		55
Total number of hours		88
OBJECTIVE OF THE COURSE		
This course focuses on developing an understanding of the structure and the properties of the most important types of tropical wood.		
TEACHING METHODS		
Lecture, classes		
Course learning outcomes		The reference to field of study outcomes
Knowledge	O1 Students will have advanced knowledge of biology and related sciences adjusted to wood science	TD1A_W02
	O2 Students will have advanced knowledge of forest and wood resources, and basics of technology and development of environment as adjusted to wood science	TD1A_W05
	O3 Students will have advanced knowledge of functions of living organisms with different levels of complexity, technological engineering tasks as adjusted to wood science	TD1A_W06
	O4 Students will reveal expertise of advanced methods and tools used for solving problems in area of wood technology	TD1A_W07
Skills	O5 Students will have skills to seek out, understand and analyze information in a range of wood technology as coming from different sources and given in different form, as well creative interpretation of information, derive conclusions, express and justify opinion	TD1A_U01
	O6 Students will be able for independent and in team planning and carrying out research or design tasks in the area of wood technology, as well as analyzing and assessing correctness of carried out tasks	TD1A_U04
	O7 Students will be able to apply appropriate information technologies for seeking and processing different information in the area of wood science	TD1A_U03
Social skills	O8 Students will understand the need for continuous learning, will be able to inspire and organize learning processes of other persons	TD1A_K01
	O9 Students will be able to cooperate and work in a team, both as a leader and a member of a team	TD1A_K02
	O10 Students will be able to establish proper priorities connected with solving tasks being defined by a student or others	TD1A_K03
Methods of evaluation of outcomes achievement Exam, partial exam Work in group, discussion		Symbols of course learning outcomes O1, O2, O3 O4, O5, O6, O7, O8, O9, O10
TEACHING CONTENT		
Lectures: Characteristics of forest cover and structure of forest stands on various continents. Timber harvesting and environmental protection. The terminology used in the timber trade in Europe according to current standards. Diversity of microstructural features and colors of tropical wood. Macrostructural features of wood useful for the determination of selected wood species. Physical and mechanical properties of major tropical wood species in terms of its use in the wood industry. Specific properties of exotic wood: toxicity, resistance to abiotic and biotic factors. The main defects in tropical wood.		
Classes: Comparative analysis of microscopic structure of American (<i>Swietenia</i>), African (<i>Khaya</i> and <i>Entandrophragma</i>) and Asian (<i>Shorea</i>) mahogany wood. Comparative analysis of the microscopic structure of tropical wood: courbaril, teak, wenge, balsa, quaiacum wood, African walnut, opepe, sucupira, afzelia, zebrano, mansonia, iroko, ipe, merbau. Physical and mechanical properties of selected tropical wood species.		

The course completion criteria and methods Rating of the exercises, exam	Percent of a final grade 50/50
RECOMMENDED LITERATURE	
1. Barry R.G., Chorley R.J., (2003): Atmosphere, weather and climate. Routledge Chapman & Hall, London. 2. Dahms K.G. (1995): Tropical Timber Atlas. Part II – Asia, Australia. Association Technique Internationale des Bois Tropicaux 3. EN 13556:2003 Round and sawn timber – Nomenclature of timbers used in Europe. 4. Haygreen J.G., Bowyer J.L. (1996): Forest products and wood science. Iowa State University Press, Ames. 5. Kollmann, F.F.P., Côté, W.A. (1984). Principles of wood science and technology. Vol. I. Solid wood. Springer-Verlag, Berlin etc 6. Leistikow K.U. (2007): The Woodbook. Taschen Amer LLC 2007. 7. Wagenführ R. (2006): Holzatlas. Fachbuchverlag Leipzig.	

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