COURSE OUTLINE

1. GENERAL

SCHOOL	School of Technology
DEPARTMENT	Department of Forestry, Wood Science and Design (Karditsa)
LEVEL	*Undergraduate*

CODE	KM311	**STUDENT SEMESTER**	3th

COURSE TITLE	Wood Technology

ACTIVITIES	**WEEKLY HRS**	**ECTS**
Lectures and Workshops	2 + 1	5
	3	5

TYPE OF COURSE	Special substructure
PREREQUISITES:	none
LANGUAGE TEACHING AND EXAMINATION:	Greek
THE COURSE OFFERED TO STUDENTS ERASMUS	none
WEBPAGES COURSE (URL)	https://eclass.uth.gr/courses/FWSD_U_117

2. LEARNING OUTCOMES

Learning Outcomes

The aim of the course is students to learn, since they know about structure and properties of wood, the appropriate knowledge about production technology of wood products that produced with mechanical processes. Also, to know special handling techniques that increase the properties of sawn wood, related with drying, impregnation and wood steaming.
At the end of the course, students:
- Know the production technology of sawn wood, piles, poles, veneers.
- Know the proper organization and mechanical equipment of sawmills, drying claves, impregnation and steaming plants and veneering machines.
- Know the right selection, classification and protection rules for the production of qualified sawn wood.
- Know the basic maintenance rules for sawmill woodworking machines.
- Know the quality classification of sawn wood.

General Skills

Upon successful completion of the course, the students will be able to develop and cultivate basic professional and social skills:
- Search, analysis and synthesis of data and information, using the necessary technologies
- Adaptation to new situations
- Decision making
- Autonomous work
- Teamwork
- Respect for the natural environment
- Demonstration of social, professional and moral responsibility and sensitivity to gender issues
- Exercise criticism and self-criticism
- Promoting free, creative and inductive thinking

3. COURSE CONTENT

The course focuses on issues related to:
- Round wood and sawn wood supply, selection criteria international and national practice.
- Sawn wood, sawmill parts, technology and methods of sawing, basic sawing machines, grinding and maintenance of cutting tools.
- Wood drying, natural and artificial drying techniques, drying schedules, wood abnormalities.
- Piles and poles – production and uses.
- Wood impregnation methods, situation in Greece.
- Steaming and bending of wood.
- Veneers – production and uses.
- Quality of wood, quality classification systems and certification. Marking of wood for building constructions.

4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY METHOD	Face to face in classroom and laboratory
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Use of PC – PowerPoint presentations Use of movies Lecture support via e-class

MANAGEMENT OF TEACHING	Activity	Semester Workload
	Lectures	26
	Studio workshops	13
	Visit a sawmill for training	31
	Individual and work study for term assignment	55
	Course Total	125
STUDENT EVALUATION	Final evaluation includes final written exams	

5. RECOMMENDED-BIBLIOGRAPHY

https://eclass.uth.gr/modules/document/?course=FWSD_U_117

- Bellman H. 1994. Names of the more important European tree species and respective woods in 12 languages. Holz als Roh- und Werkstoff 52 (1994) 325-336.
- Boone R.S., Kozlik C.J., Bois P.J., Wengert E.M. 1988. Dry Kiln Schedules for Commercial Woods. USDA, FPL-GTR -57.
- Βουλγαρίδης Η. 2015. Ποιότητα και χρήσεις του Ξύλου. ΣΕΑΒ, ISBN: 978-960-603-251-6.
- Desch H., Dinwoodie J.M. 1993. Timber, Its structure, properties and utilization. Ed. Macmillan, p. 410.
- FPL. 2010. Wood handbook. Wood as an Engineering Material. USDA, FPL-GTR-190.
- Κακαράς Ι. 2009. Τεχνολογία ξύλου (Πρίση, ξήρανση, εμποτισμός, καμπύλωση, καπλαμάς).
- Τσουμής Γ. 1991. Επιστήμη και τεχνολογία του ξύλου. ΑΠΘ. (βιβλιοθήκη Παραρτήματος).
- Trubswetter Th. 2009. Holztrocknung. Ed. Hanser, p. 204.

Scientific Journals:
- Holz als Roh- und Werkstoff

- Journal of Wood Science
- Wood Research