

## MODULE DESCRIPTION

### General

School	Geotechnical Sciences
Department	Forest and Natural Environment Sciences

### Module Information

Title	Wood & Urban Green Spaces
Course Code	E.Y.2
Level of Studies	Undergraduate Studies
Teaching Period	Winter
Attendance Type	Compulsory
Prerequisites	Design in Digital Environments

Orientation	Weekly Hours		Year	Semester	ECTS
	Lectures	Laboratory work			
Landscape Architecture & Restoration	2	2	3	5	4

### Faculty Instructor

Dr. Antonios N. Papadopoulos

### Type of Module

- General Foundation
- Specific Foundation / Core
- Knowledge Deepening / Consolidation

### Mode of Delivery

- Face to face
- Distance learning

### Digital Module availability

- E-Study Guide
- Departments Website
- E-Learning

### Language

	Teaching	Examination
Greek	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
English	<input type="checkbox"/>	<input type="checkbox"/>

## Erasmus

- The course is not offered to exchange programme students

## Learning Outcomes

The primary aim of this module is to fully introduce students to wooden structures that are used in urban green spaces, where the climatic conditions are more difficult compared to indoor wooden structures. A secondary aim involves the design of innovative wooden structures using advanced software. The learning outcomes are as follows:

- To fully understand the technology production of wooden structures that are used in urban green spaces
- To know the basic principles of wood protection and to apply the suitable preservatives for wood structures protection
- To design a wooden structure using advanced software
- To be able to fully implement a research project related to wooden structure

## List of General Competences

- Apply knowledge in practice
- Work autonomously
- Work in teams
- Work in an international context
- Work in an interdisciplinary team
- Respect natural environment
- Advance free, creative and causative thinking

## Module Content (Syllabus)

The module describes issues about the wood structures, technology and their industrial utilization. The wood structure is focused on main macroscopic and physical characteristics that are necessary for wood identification. Wood technology discusses issues on main wood properties, wood preservation and wood products such as lumber, plywood, laminated wood, particleboards and fiberboards. The technology production, the properties, the protection and the applications of the wooden structures used in urban green spaces are fully covered. Basic principles of design-used software are also presented (2D Auto-Cad, 3D Auto-Cad, 3Dmax).

## Educational Material Types

- Book
- Notes
- Slide presentations
- Video lectures
- Multimedia
- Interactive exercises

Other:

### Use of Information and Communication Technologies

- Use of ICT in Course Teaching
- Use of ICT in Laboratory Teaching
- Use of ICT in Communication with Students
- Use of ICT in Student Assessment

### Module Organization

Course Activity	Workload (hours)
Lectures	26
Laboratory work	26
Field Trip/Short Individual Assignments	20
Independent Study	28
<b>Total</b>	<b>100</b>

### Student Assessment Methods

- Written Exam with Multiple Choice Questions
- Written Exam with Short Answer Questions
- Written Exam with Extended Answer Questions
- Written Assignment
- Report
- Oral Exams
- Laboratory Assignment

### Suggested Bibliography (Eudoxus and additional bibliography)

1. Dinwoodie, J.M. (1981). Timber: its nature and behaviour. Van Nostrand Reinhold, New York, pp: 61-63.
2. Desch, H. (1993). Timber, Its structure, properties and utilization. Macmillan.
3. Zwenger, K. (2000). Wood and wood joints. Birkhauser, Basel.Berlin.Boston.
4. Κακαράς Ι. (2013). Τεχνολογία ξύλινων δομικών κατασκευών. Βιβλίο, Εκδόσεις ΙΩΝ.
5. Κατσαραγάκης Ε. (2000). Ξύλινες κατασκευές. Ε.Μ.Π.
6. Ρίζος Δ. (1998). Οι ξύλινες κατασκευές και τα αντικολλητά ξύλα (Τόμοι Α και Β). Εκδόσεις ΙΩΝ.
7. Wood Handbook (1999). Wood as an engineering material. USDA Forest Service.
8. Παπαδόπουλος Α.Ν. (2019). Σχεδιασμός & Συντήρηση Έργων Ξύλου στο Αστικό Πράσινο. Διδακτικές Σημειώσεις, Τμήμα Δασολογίας & Φυσικού Περιβάλλοντος, Διεθνές Πανεπιστήμιο

της Ελλάδος.