

## COURSE OUTCOME

### 1. GENERAL

<b>UNIVERSITY</b>	UNIVERSITY OF THESSALY		
<b>SCHOOL</b>	SCHOOL OF TECHNOLOGY		
<b>DEPARTMENT</b>	FORESTRY, WOOD SCIENCES & DESIGN		
<b>STUDY LEVEL</b>	<i>Postgraduate</i>		
<b>COURSE CODE</b>	ΞΣΕ981	<b>Semester</b>	9th
<b>COURSE TITLE</b>	IMPLEMENTATION OF WOOD CONSTRUCTION PROJECT		
<b>ACTIVITIES</b>		<b>WEEKLY HOURS</b>	<b>ECTS</b>
Lectures		1	3
<b>Workshops</b>			
<b>Laboratories</b>		2	3
<i>Σύνολο</i>		<b>3</b>	<b>6</b>
<b>TYPE OF COURSE:</b>	Scientific area + Skills development		
<b>PREREQUISITES:</b>	No		
<b>LANGUAGE TEACHING AND EXAMINATION:</b>	Greek		
<b>THE COURSE OFFERED TO STUDENTS ERASMUS:</b>	No		
<b>WEBPAGES COURSE (URL)</b>			

### 2. LEARNING OUTCOMES

#### Learning Outcomes

The purpose of the course is for the students to get to know and deal fully with the realization of a wooden structure, applying everything that has been taught in previous courses. In this lesson they complete the knowledge about the use of wood and other materials (eg metal, glass, plastic), choose a construction, create a complete portfolio, edit the plans and carry out a construction in a laboratory in groups. They evaluate the construction and suggest improvements.

Upon successful completion of the course, the student will be able to:

- To know the steps for writing a complete file, concerning a wooden structure.
- To have a complete view of all the materials he may use in the constructions.
- To analyze the potential problems that may arise.
- To support a construction photographically, graphically and with texts.
- To resolve issues related to the timely supply of raw materials
- To implement a construction almost "from scratch" (with the help of laboratory teachers).
- Evaluate a build and suggest improvements

#### General Skills

- Search, analysis and synthesis of data and information, also using appropriate technologies
- Project planning and management
  - Decision making
- Teamwork, coordination of actions
- Critical perception, flexibility of actions
- Promotion of free, creative and inductive thinking

### 3. COURSE CONTENT

In the theoretical part of the course, the student is taught and learns:

- The methods of study - selection of a wooden structure. Discusses, is informed about production methods of different constructions from wood and other materials (metal, glass, polymers, ceramics, etc.). Examines and resolves design issues that arise, depending on the application of different processes.
- Manufacturing methods with Plastics (high pressure molding, rotational molding, blow molding, foam rubber expansion in a mold, compression in a mold, extrusion, chemical reaction molding (foam materials), Ceramics (Slip Casting, pressure molding, traditional pottery (hand and industrial), Glass (vertical and horizontal method of flat glass production, pressure production, mold blowing production, rolling production, rotational pressure, centrifugal force, double compression in two molds, traditional and industrial glasswork, engraving, water/Laser cutting. Metals: Production by Overforming, by rotary forming, by deep hollowing, by casting, Lost wax casting, Centrifugal casting.
- To choose a construction from among several original sentences. Analyze and solve manufacturing problems.
- To choose the way to create a folder (format – way of writing and setting up).
- Create images and photorealistics that explain the benefits of the idea.
- Create/correct final construction drawings, present and paginate them. To write texts explaining the proposal, to record the process of manufacturing original furniture, to make pagination of an overall presentation with graphic processing on a PC.
- To build the prototype in a laboratory, in groups and under the supervision of teachers.
- To resolve issues of timely supply of commercially available materials.
- To evaluate the construction. To carry out construction photography, printing and folder creation.

The course also includes a laboratory part.

In the laboratory part of the course, the student chooses and implements himself:

- The materials he will use and the connections he will make, with machines and hand tools.
- The distinction of tasks by space and time and the choice of the implementation machine.
- The selection and application of additional equipment (hinges, mechanisms, fittings, upholstery fabric, etc.)
- Any special techniques (eg lamination, bending mold making) that may be required.
- The application of coatings (paints, glazes) that the construction may require.

Attending the laboratory part is mandatory for 80% of the hours. Students in groups usually carry out 1 construction, of moderate difficulty, with elements of originality. The oral support of the tasks and the satisfactory performance of the construction are elements of the laboratory evaluation.

#### 4. TEACHING AND LEARNING METHODS - EVALUATION

<b>TEACHING METHOD</b>	Στην τάξη	
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	<ul style="list-style-type: none"> <li>• Use of PCs, ppt slides, projector, video projection.</li> <li>• Learning process support through the e-class electronic platform</li> </ul>	
<b>MANAGEMENT OF TEACHING</b>	<b>Activity</b>	<b>Semester Workload</b>
	Theory lectures, video screenings related to the subject	7
	Work presentations – discussion – solving questions – choosing final solutions	6
	Laboratory training	26
	Small individual practice	50

	tasks	
	Independent Study, market research, writing of final texts, dossier preparation	61
	<b>Total Course (25 workload hours per credit unit)</b>	<b>150</b>
<b>STUDENT EVALUATION</b>	<p>I. Written final exam (100%) which includes: - Short answer questions from all the material, Multiple Choice Test.</p> <p>II. Laboratory, manufacturing file support. Oral examination and evaluation by the trainers of the final construction.</p>	

## 5. RECOMMENDED-BIBLIOGRAPHY

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- Jürgens H.W., Aune I.A., Pieper U. 1990. International Data on Anthropometry. Occupational Safety and Health Series No 65, ILO, Geneva 1990.
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