COURSE OUTCOME

KM241 – CAD-2D

1. GENERAL

SCHOOL	Technology
DEPARTMENT	Forestry, Wood Science & Design
LEVEL	*Undergraduate*
CODE	KM241

CODE	KM241	**STUDENT SEMESTER**	2nd
COURSE TITLE	CAD-2D		

ACTIVITIES	**WEEKLY HRS**	**ECTS**
Lectures and Workshops	2+1	6

TYPE OF COURSE	Scientific Area
PREREQUISITES:	None
LANGUAGE TEACHING AND EXAMINATION:	Greek
THE COURSE OFFERED TO STUDENTS ERASMUS	No
WEBPAGES COURSE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course aims for students to become familiar with two-dimensional technical drawing using a computer.

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

- The principles and methods of two-dimensional electronic design

- The basics of two-dimensional design

- The meaning of different views

- The induction of a sectional views

- The concept of geometric tolerances

- Work plans

- The basics of 2D dimensioning

- Drawing scales, drawing papers and drawing lines

- To design 2D geometric entities

- Modify and transform 2D geometric entities

General Abilities

- Creativity by utilizing modern technology
- Ability to apply a wide range of scientific and technical knowledge related to technical design using a computer

3. COURSE CONTENT

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

- The basics of two-dimensional drawing technique using sketches. Units, line types, scales, views, etc.
- The basics of two-dimensional design using a computer and specifically the creation of lines, auxiliary lines, circles, polylines, ellipses, rectangles and polygon
- The views and, in particular, the visualization, the hidden lines, the surfaces, etc.
- The section views and, in particular, the cutting level lines, the delineation, the section line style, the placement of the section view
- The auxiliary projections-views and, in particular, the projection between the normal and the auxiliary, the transfer of lines between projections, the projection of rounded surfaces, the projection of irregular surfaces
- The dimensioning of a design
- The concept of Tolerances
- The installation of geometric tolerances
- The creation of work plans

The course exercises are done one (1) hour per week. Attendance by students is mandatory by at least 50%. The teacher points out the importance of this monitoring, but also of the theory, while incentives are given for the continuous participation of the students in it.

Essentially, the course exercises are a continuation of the theory, where practices that have a practical application in the object of the two-dimensional drawing technique are solved. Furthermore, the activities aim for the student to maximize the knowledge acquired from the theoretical part with an internship.

The relevant directions are given, while rich material and instructions are posted in the e-class.

The working grade is calculated at 30% in the course's final grade. The remaining percentage concerns the final written examination of the course theory.

4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY METHOD	In the class
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	- Use of appropriate 2D CAD design software. - Learning process support through the electronic platform e-class. - Use of supervisory tools. - Fifteen (15) PCs in the Laboratory for students to practice in digital 2D design software.

MANAGEMENT OF TEACHING	*Activity*	*Semester Workload*
	Lectures	26
	Semester work	40
	Laboratory Exercises	13
	Self-dependent study	71

	Course Total (25 hours of workload per credit unit)	150
STUDENT EVALUATION	Written final exam (70%) which includes: I. Short answer questions from all the material of the book -Problem solving -Multiple choice questions II. Presentation of work (20%)	

5. RECOMMENDED-BIBLIOGRAPHY

Books

- CAD and Prototyping for Product Design , Douglas Bryden
- Τεχνική Σχεδίαση με το Autocad 2015, James D. Bethune, Εκδόσεις Μ. Γκιούρδας , 2015
- Geometric Modeling , Hagen, Farin, Noltemeier, 1993

Journals

- International Journal of Computer Aided Design
- Computer Aided Design Journal
- Computer Aided Design and Applications
- Journal of Computer Aided Design and Computer Graphics