COURSE OUTLINE

1. GENERAL

SCHOOL	ENGINEERING		
DEPARTMENT	PRODUCT AND SYSTEMS DESIGN ENGINEERING		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	**4208**	**SEMESTER**	**9**
COURSE TITLE	**Project in Product Design and Manufacturing**		

INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*	**WEEKLY TEACHING HOURS**	**CREDITS**
Lab exercises	**4**	**6**
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		

COURSE TYPE *general background, special background, specialised general knowledge, skills development*	Special background, skills development
PREREQUISITE COURSES:	NONE
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK/ENGLISH
COURSE DELIVERED TO ERASMUS STUDENTS	YES
MODULE WEB PAGE (URL)	https://eclass.uowm.gr/

2. LEARNING OUTCOMES

Learning outcomes

On successful completion of this module the learner will be able to:

- To apply all the methodological tools and sketching techniques taught.
- Develop in details digital models of the product itself
- Select appropriate materials
- Analyse and optimize digitally the designs
- Incorporate all manufacturing issues in the design
- Evaluate and redesign if necessary the product based on the prototypes build.

General Skills

Upon successful completion of the program students will:

- have the theoretical and practical background on the field of product and systems design engineering and the corresponding profession.
- utilize scientific knowledge to understand, analyze and solve problems.
- apply a wide range of scientific and technical knowledge concerning the design and development of products and systems.

3. COURSE CONTENTS

1. The module is aiming in combining all aspects of the design and manufacturing lessons taught under the same roof. The main idea is for the students to be able to design, prototype and manufacture innovative and impressive products.
2. The students should feel like being working for an external collaborator in order to imitate realistically the working conditions after completing the degree.

4. TEACHING METHODS - ASSESSMENT

<table>
<tr><td>MODE OFDELIVERY</td><td>In class, face to face</td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</td><td>• Video and slide presentations via projector
• Support of teaching process via the electronic platform e-class
• Communication with students.</td></tr>
<tr><td>TEACHING METHODS</td><td>
<table>
<tr><th>Activity</th><th>Semester workload</th></tr>
<tr><td>Lab exercises</td><td>90</td></tr>
<tr><td>Non-directed study</td><td>60</td></tr>
<tr><td></td><td></td></tr>
<tr><td></td><td></td></tr>
<tr><td>Course total</td><td>150</td></tr>
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<tr><td>ASSESSMENT METHODS</td><td>Lab exercise which includes:
I. Homework exercises
II. Exercises in the class
III. Coursework for portfolio built</td></tr>
</table>

5. ATTACHED

- Suggested bibliography:

1. Συστήματα CAD/CAM και Τρισδιάστατη Μοντελοποίηση, Ν.Α Μπιλάλης, Ε. Μαραβελάκης, Εκδόσεις Κριτική, 2014, Έκδοση: 2η έκδ./2014
2. Mastering CAD/CAM, Ibrahim Zeid. Κωδικός Βιβλίου στον Εύδοξο: 12867099
3. Βασικές Αρχές Συστημάτων CAD/CAM/CAE, Kunwoo Lee, Εκδόσεις Κλειδάριθμος ΕΠΕ, 1η/2009, ISBN: 978-960-461-139-3.
4. Class notes