COURSE OUTLINE

1. GENERAL

SCHOOL	ENGINEERING		
DEPARTMENT	PRODUCT AND SYSTEMS DESIGN ENGINEERING		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	**2202**	**SEMESTER**	**3**
COURSE TITLE	**STUDIO-3 – IDEATION**		

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**
Lectures	**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

Design Studio III focuses on the integration of parts of the design theory (creative tools/techniques, design methodologies, theoretical tools/methods), and the usage of traditional and new media in creating new products. The course is intended to provide the following benefits:

1. Understand what is Ideation through the use of creative tools/techniques and methodologies
2. Enhance team working skills for collaborative design.
3. Competence with a set of tools and methods for product design and development.
4. Awareness of the role of multiple functions in creating a new product
5. Reinforcement of student's abilities to manage multiple materials and digital tools through the design process.
6. Reinforcement of knowledge from other courses.
7. Students will enhance the ability to present and defend their own design ideas.
8. Students will enhance the ability to work in interdisciplinary environments.
9. Enhance students' ability to adapt in complex ill-defined design problems.

General Skills

Upon successful completion of the program students will:

- Students acquire basic knowledge in the methodological solution of design problems, while doing their first steps in the critical understanding of the relevant theories and principles that govern modern design practice.
- Students acquire basic skills while gradually gaining the ability to organize information, to present multiple ideas as solutions to complex certain problems such as design problems.
- Students, through their introduction to the principles of collaborative design, practice skills that enable them to manage techniques and work plans, where sharing of responsibility is required for decision-making in unpredictable design environments.

3. COURSE CONTENTS

The Studio-3 course is an essential introduction to the creative design process through the practices proposed by the "Design Thinking" and "Development Concept" product and system design methodologies. It also presents in detail a series of tools for recording, editing and creating new design ideas. All tools are described for their operation, use and application in specific design problems.

The module "Studio 3 - Ideation" is a comprehensive reference of the "Design Thinking" methodology that provides solutions to design problems by approaching them, based on their solutions. This method is extremely useful in dealing with complex problems that are not strictly defined and are related to the understanding of human needs. The anthropocentric approach to this design methodology creates new design opportunities using appropriate tools that are described in detail in the section "Creative Ideation Tools". At the same time, it is mentioned the "Concept Design" procedures with the specific sections: a) Concept development (clarification of the problem, exploration of the problem, determination of design directions), b) Selection of Concept and c) Testing the Concept. The "Creative Ideation Tools" describe and analyze in detail methodologies that help the Design Engineer in finding and defining possible solutions and applications of problems in the design process. Specifically, the tools described in the course are: brainstorming, mind-map, mood-board, Design Scenario construction and deconstruction, storyboard, etc. The main goal of the course is also the development of skills in the representation of ideas in 2D and 3D space with the selective use of basic conceptual tools. Also, the proposed tasks are not aimed at a final product but, based on a goal, to capture a final prototype that meets the specifications set up in the description of the project with emphasis on the possible functionality of the product, usability and quality of the final result.

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>Lectures</td><td>50</td></tr>
<tr><td>Non-directed study</td><td>50</td></tr>
<tr><td>Lab exercises</td><td>50</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</td></tr>
</table>

	II. Exercises in the class III. Coursework for portfolio built Final written exam which includes: i. Short-answer questions ii. Multiple choice questions iii. Problem solving

5. ATTACHED

- Suggested bibliography:

(Eudoxus repository):

- Βιβλίο [94689190]: Εργαλεία Σχεδίασης Προϊόντων, Μανάβης Αθανάσιος, Ευκολίδης Νικόλαος, Κυράτσης Παναγιώτης Λεπτομέρειες
- Βιβλίο [13903]: ΣΧΕΔΙΑΣΜΟΣ ΤΩΝ ΑΝΤΙΚΕΙΜΕΝΩΝ ΤΗΣ ΚΑΘΗΜΕΡΙΝΟΤΗΤΑΣ, DONALD A. NORMAN.