COURSE OUTLINE

1. GENERAL

SCHOOL	ENGINEERING		
DEPARTMENT	PRODUCT AND SYSTEMS DESIGN ENGINEERING		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	**5205**	**SEMESTER**	**9**
COURSE TITLE	**Automotive Design**		

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 and Lab exercises	**3**	**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

The course aims to cover the broadest spectrum of automotive and transport design focusing on design-driven innovations.

In addition to traditional elements of styling, comfort, safety and usability, our curriculum emphasizes vital topics such as sustainable mobility, the implications of brand, and product life cycle. Exploring the balance between form and function. Automotive Design students develop the ability to create vehicle concepts with distinct personality, improved function, and broad social impact. The course can help the students gain fluency in drawing and in physical and digital modeling, as well as develop an understanding of vehicle architecture by aesthetic point of view.

Some examples of the automotive design categories are vehicle exteriors, vehicle interiors (including user interface and user experience) and, alternative transportation (including motorcycle, marine, aircraft, personal mobility, and public transit).

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

- Advocate and create solutions to transportation and mobility challenges
- Visualize and represent anything they can imagine
- Collaborate on and facilitate discussions on design objectives
- Inspire and inform contemporary and future design thinking
- Dare to challenge and value the ethical and ecological impacts of their work
- Anticipate future global trends
- Contribute to and broaden dialogues with an open mind and positive attitude
- Pursue original and unique approaches, new design language; avoid cliches and trends.

General Skills

Upon successful completion of the program students will:

- have the theoretical and practical background on the field of automotive product design.
- utilize scientific knowledge to understand, analyze and solve problems based on automotive issues.
- apply a wide range of scientific and technical knowledge concerning the design and development of products based automotive aesthetics.

3. COURSE CONTENTS

1. Form design and visual communication.
2. Design methods and the industries based on automotive design.
3. Design, function, and users.
4. Design automotive innovation.
5. Concept creation.
6. Design delivery.
7. Physical prototyping.
8. Additive manufacturing
9. Reverse engineering.

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>25</td></tr>
<tr><td>Non-directed study</td><td>25</td></tr>
<tr><td>Lab exercises</td><td>100</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

Final written exam which includes:
i. Short-answer questions
ii. Multiple choice questions
iii. Problem solving</td></tr>
</table>

5. ATTACHED

- Suggested bibliography:

1. Βιβλίο [102072449]: Σχεδιασμός Προϊόντων, Κυράτσης Παναγιώτης, Ευκολίδης Νικόλαος, Μηνάογλου Πρόδρομος, Μανάβης Αθανάσιος Λεπτομέρειες
2. Βιβλίο [33153911]: Πολιτισμός της αυτοκίνησης – design and styling, Λιαμάδης Γεώργιος Λεπτομέρειες
3. Class notes