

COURSE OUTLINE

1. GENERAL

SCHOOL	ENGINEERING		
DEPARTMENT	PRODUCT AND SYSTEMS DESIGN ENGINEERING		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	5302	SEMESTER	8
COURSE TITLE	DESIGN FOR ALL		
INDEPENDENT TEACHING ACTIVITIES <i>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</i>		WEEKLY TEACHING HOURS	CREDITS
Lectures		3	6
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	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
<p>The course is built according to the EU Recommendations for Design for All programs for Designers and Engineers. This is important as Design for All applies to different industries.</p> <p>Upon successful completion of the course students should</p> <ul style="list-style-type: none"> • Understand a wide range of topics related to Design for All in general and Information and Communication Technologies (ICT) in particular. • Have a good understanding of the importance of ethical Design for All and its role in designing products, systems and services • Be familiar with a range of available helpful Technologies in terms of their capabilities and limitations • Be able to integrate knowledge and be able to achieve the recognition, understanding and development of problem-solving strategies to prevent the exclusion of people from using products, systems and services. • Be able to properly apply the principles and guidelines of Design for All in a wide range of products, systems and services • Have developed a critical understanding of established tools and techniques as well as international

standards that support the design and evaluation of products, systems and services, so that they are accessible to a wide range of users without the need for specialized customizations.

- Be aware and have the right skills to make presentations and communicate effectively with the public in a way that addresses the problems faced by people with a variety of aesthetic, motion and mental limitations
- Be able to work proactively and take measures to avoid obstacles to the design of new accessible products, systems and services.

General Skills

The General Skills cover topics such as:

- What is Design for Everyone? A general discussion of what is the basic meaning and what it is covered by the course.
- Design for sensitizing everyone: understanding sensory, motion and cognitive limitations, by simulating the experience.
- Why Design for Everyone? An examination of ethical and moral, demographic, socio-economic and design reasons.
- Recommendations. (Examination of principles, standards, guidelines, best practices).

There is a set of skills also offered,

- Communication skills for different audiences.
- Accessible content: understanding how information is perceived and the various forms it takes, including web accessibility, document accessibility, mobile phone access applications.
- Accessible input and output: exploring technologies and interaction styles for communication through computing devices.
- New examples of interaction. Understanding how new technologies (eg robotics) and new uses of technology are changing the general environment and the meaning of Design for All
- User-Centered design methods for elderly and people with disabilities. This course reviews user-centered design methods that students have already been taught in other courses such as Human-Computer Interaction and Interactive Design. It builds on this knowledge to look at how to design for a wider variety of users, in terms of understanding needs and requirements as well as designing and conducting evaluations.

3. COURSE CONTENTS

In this course, students are taught the concepts and necessity of Design for All, the need for awareness, as well as the values, principles, international recommendations and guidelines for

Design for All. Emphasis is placed on issues related to accessibility in Information and Communication Technologies (ICT), such as accessible content, accessible input and output of ICT systems. New forms of ICT interaction, processes, principles and examples of innovative human-computer interactions, as well as methods and techniques for designing accessible anthropocentric systems are also studied. The Design for All course refers to a design ethic that seeks to design solutions that do not exclude people. Design for All enriches the Design brief, resulting in a more robust design solution. Frequently it is the base for motivation and inspiration of innovative designs.

4. TEACHING METHODS - ASSESSMENT

MODE OF DELIVERY	In class, face to face	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	<ul style="list-style-type: none"> • Video and slide presentations via projector • Support of teaching process via the electronic platform e-class • Communication with students. 	
TEACHING METHODS	Activity	Semester workload
	Lectures	90
	Non-directed study	60
	Course total	150
ASSESSMENT METHODS	<p>Final written exam which includes:</p> <ol style="list-style-type: none"> Short-answer questions Multiple choice questions Problem solving <p>Assignments</p>	

5. ATTACHED

Course manuals:

- Koutsambasis P. (2015) User-Focused Interactive Systems Evaluation: Usability, Accessibility, Collaborative Work, User Experience. Greek Academic Textbooks and Aids. Association of Greek Academic Libraries. * especially chapters A and B. * (Eudoxus)
- Pullin, G. (2009): Design Meets Disability. MIT Press.
- Stephanidis, C. (ed) (2009): The Universal Access handbook. CRC Press Taylor & Francis Group.

Related scientific journals:

Journal of Universal Access in the Information Society (UAIS) Springer