

COURSE OUTLINE

1. GENERAL

SCHOOL	POLYTECHNIC		
DEPARTMENT	ARCHITECTURE		
LEVEL OF COURSE	UNDERGRADUATE		
COURSE CODE	ARC_176A	SEMESTER OF STUDIES	FOURTH
COURSE TITLE	DIGITAL MEDIA 2		
INDEPENDENT TEACHING ACTIVITIES	TEACHING HOURS PER WEEK	ECTS CREDITS	
Lectures, seminars and laboratory work	4	4	
COURSE TYPE	General Knowledge and Skills Development (Computer graphics and Architectural representation)		
PREREQUISITE COURSES:			
TEACHING AND ASSESSMENT LANGUAGE:	Greek.		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBPAGE (URL)	https://eclass.upatras.gr/courses/ARCH566/		

2. LEARNING OUTCOMES

Lerning outcomes
<p>The course aims to introduce students to advanced techniques of architectural design and three-dimensional visualizing. In the context of architectural practice, emphasis is placed on the principles of constructing architectural representations. At the same time, basic knowledge of innovative design tools is provided. Upon successful course attendance, students acquire a practical functional skill level in the use of complex digital tools, with emphasis on design techniques that allow the accurate design of complex environments. Upon completion of the course, students are expected to:</p> <ul style="list-style-type: none"> • Have developed a three-dimensional perceptual ability in studying forms, spaces and environments. • Have built up the power of architectural representation in the planning process, in terms of compositional decision-making and analysis of complex spaces and functions. • Have gained experience in architectural observation, both at the level of analysis and synthesis, and have developed skills in using advanced design techniques and software tools.
General Abilities
<p>By the end of this course the student will, furthermore, have developed the following skills (general abilities):</p> <ul style="list-style-type: none"> - Ability to exhibit knowledge and understanding of the essential facts, concepts, theories and applications which are related to Architecture and its representation. - Adaptation to new situations - Group work - Autonomous work - Design and project management - Promote creative inductive thinking. - Study skills needed for communicating architectural projects

- Ability to interact with others in design process.

3. COURSE CONTENT

The course covers issues related to three-dimensional design and architectural representation. Specifically, it focuses on the modeling of architectural compositions, photorealism and animation. At the same time, on a theoretical level, it explores how objects are portrayed in 3D space, virtual reality and cyberspace, which is perceived as a dynamic representation of the architectural form. Part of this focusing on dynamic means of representation is channeled on animation, a means that deals with issues of behavior (materials and individuals in space), energy and transformations.

During the semester, students are invited to address issues related to:

- Geometry, complex forms and modeling (three-dimensional design).
- Light, space and image.
- Transformation and movement.

With the ultimate goal of completing a project and digitally presenting it, the development of a flexible spatial architectural composition is required during the semester. The process is broken down into:

1. Three-dimensional spatial resolution. Clarification of compositional principles and architectural values of the project through a series of representations.
2. Transformations of the model in terms of its geometry and materiality. Variants of utilization of characteristic components of the project, adapting them to new data.
3. Movement and habitation, transformations and new uses.
4. Representations of composition and constructing animated images.

Through the evolutionary process of the exercises, compositional process is recorded and represented while at the same time software-tools are a subject to experimentation, not as simple instruments for the modeling of pre-conceived architectural space but as innovative ways of composing it.

4. TEACHING AND LEARNING METHODS – ASSESSMENT

The lessons are basically laboratory, supported by lectures and criticism. There are a few assignments and a final project. Main subject is the production and presentation of the architectural work, based on experimental works that approach the design process on a multifaceted basis. The content of the exercises aimed at developing students' perceptual capacity, where digital media becoming tools for study, imaging and synthesis. At the end of each semester a synthetic architectural project is presented.

TEACHING METHOD	Lectures, seminars and laboratory work face to face.	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Use of Information and Communication Technologies (ICTs) in teaching. The course utilize graphic software, as the objective of the course is to introduce students to computer –based architectural design.	
TEACHING ORGANIZATION	Activity	Work Load per Semester
	Lectures	5
	Supporting seminars solving of representative problems and presentation of techniques and theory associated to each laboratory experiment	13
	Field exercise	22
	Preparation of assignments	10
	Total number of hours for the Course (25 hours of work-load per ECTS credit)	50 hours (total student work-load)

STUDENT ASSESSEMENT	The attendance of lectures and laboratory courses is obligatory. Students are assessed by the exercises at 40% and the final presentation by 60%. During the semester four works are delivered (diagrammatic analysis, basic geometric representation, visualization of architectural drawings and alternative three-dimensional representation). The final proposal is delivered in a PDF format and on a printed billboard, summarizing the analysis and the complete representation of the synthetic subject.
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5. RECOMMENDED LITERATURE

<ul style="list-style-type: none"> - 'Συνεκδοχές', Τέλλιος Αναστάσιος, Εκδόσεις Επίκεντρο, 2011 - 'Προς το σύμπαν των τεχνικών εικόνων', VilemFlusser, Εκδόσεις Χρήστος Κουτσιαύτης, 2009 - Μισέλ Φουκώ, Οι λέξεις και τα πράγματα, Εκδόσεις ΕΛΕΝΗ Γ. ΣΑΡΑΦΙΔΟΥ, 2008 - Mitchell, W. 'The logic of Architecture', MIT Press, 1992 - Ζωίδης Ε. Κριτική Θεωρία και Οπτική Επικοινωνία, Εκδόσεις ΜΑΡΙΑ ΠΑΡΙΚΟΥ, 2011 - Friedhoff R. 'Visualization', Freeman and Co, 1989 - 3DS MAX 2012: Ο Φωτορεαλισμός Γρήγορα και Απλά, Μ. Νικήτα, Εκδόσεις Κλειδάριθμος, 2011 - Drawing - the motive force of architecture, Peter Cook, Wiley, 2008 - Diagram diaries, Peter Eisenman, London Thames and Hudson, 1999 - Architecture and disjunction, Bernard Tschumi, MIT Press, 1994 - Atlas of novel tectonics, Reiser+Umemoto, Princeton Architectural Press, 2006 - The Diagrams of Architecture: AD Reader, Mark Garcia, Wiley, 2010
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