

COURSE OUTLINE

(1) GENERAL

SCHOOL	ENGINEERING SCHOOL		
ACADEMIC UNIT	CIVIL ENGINEERING DEPARTMENT		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	2302516	SEMESTER	2
COURSE TITLE	INTRODUSTION TO ARCHITECTURAL DESIGN		
INDEPENDENT TEACHING ACTIVITIES	WEEKLY TEACHING HOURS	CREDITS	
<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>			
Laboratory exercises	4	4	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE	Special background, skills development		
<i>general background, special background, specialised general knowledge, skills development</i>			
PREREQUISITE COURSES:	TECHNICAL DRAWING		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS			
COURSE WEBSITE (URL)	www.opencourses.gr , http://moodle.teipir.gr , http://vplace.teipir.gr/2302516		

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Guidelines for writing Learning Outcomes

Upon completion of the course, the successful student will be able to:

1. Recall the principles and methods of Technical Drawing techniques.
2. Explain the various symbols in architectural drawings relating them with the necessary acknowledgements in the scale 1:50.
3. Apply the methodology of describing the three-dimensional objects in two-dimensional views in the built environment scale.
4. Organize a complete presentation file of the architectural design of a building in a scale 1:50 using the professional language of drawing and the appropriate dimensions of usual construction elements.
5. Analyze and combine the functional requirements of a dwelling and answer the basic organization of the interior space following the anthropometric data.
6. Interpret and compare the construction and architectural elements dimensions in the scale 1:50.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology

Adapting to new situations

Decision-making

Working independently

Team work

Working in an international environment

Working in an interdisciplinary environment

Production of new research ideas

Project planning and management

Respect for difference and multiculturalism

Respect for the natural environment

Showing social, professional and ethical responsibility and sensitivity to gender issues

Criticism and self-criticism

Production of free, creative and inductive thinking

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Others...

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Search, analysis and synthesis of data and information, using the necessary geometric representation principles and the construction elements basics.
Adapting to new situation: complete description and appropriate presentation of information as to the idea or the objet under investigation could be realized.
Decision making: synthesis of requirements and basic architectural standards.
Generate new ideas: promoting creative thinking to approach the dwelling functions organization.
Work autonomously as well as in teams.

(3) COURSE CONTENT

Modules

Introduction to the basic construction parts of a building; plans, sections and views; methodology, symbols and simplifications in the 1:50 scale.

Anthropometrics and Ergonomics; analysis and synthesis in house shells.

General design outlines during the project of a two-storey (with basement and

terrace) house. Drawing of basic bioclimatic features (*Trombe* wall, sun-blinds, categories of plants according with the building orientation, green roofs).
Drawing methodology for staircases.

Analysis

1-2. Plan, sections and views of a 1-storey traditional house, typical of Cyclades' islands (bearing structure: stone /terrace).

3-4. Plan, sections and views of a 2-storey traditional house, typical of the mainland of Greece (bearing structure: stone /roof /basement/staircase).

5-6-7. Plan, sections and views of a 1-storey modern house (bearing structure: reinforced concrete). Organization of the interior according with the anthropometric data and the ergonomic standards.

8-9-10-11-12. Plan, sections and views of a 2-storey modern house with basement (bearing structure: reinforced concrete). Organization of the interior according with the anthropometric data and the ergonomic standards. Drawing of basic bioclimatic features.

(4) TEACHING and LEARNING METHODS - EVALUATION

<p style="text-align: center;">DELIVERY <i>Face-to-face, Distance learning, etc.</i></p>	Lectures (for theoretical background strengthening) and exercises, face-to-face.																							
<p style="text-align: center;">USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	Presentations .ppt, open courses (www.opencourses.gr , http://moodle.teipir.gr)																							
<p style="text-align: center;">TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i> <i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i></p>	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="text-align: left;"><i>Activity</i></th> <th style="text-align: left;"><i>Semester workload</i></th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>0</td> </tr> <tr> <td>Laboratory exercises</td> <td>52</td> </tr> <tr> <td>Homework and study</td> <td>48</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td>Course total</td> <td>100</td> </tr> </tbody> </table>	<i>Activity</i>	<i>Semester workload</i>	Lectures	0	Laboratory exercises	52	Homework and study	48													Course total	100	
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<p style="text-align: center;">STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>Evaluation language: Greek.</p> <p><u>Evaluation procedure</u> -written examination (80%) –problem solving, -laboratory work (20%).</p> <p>All criteria are accessible to students through the open courses.</p>																							

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(5) ATTACHED BIBLIOGRAPHY

Main sources in Greek language

Athanasopoulos C. (2007), *Building Construction: Synthesis and Technology*, Athens.

Main sources in foreign language

Allen Edward (1999), *Fundamentals of Building Construction Materials and Methods*, John Wiley & Sons: NY.

Ambrose J. edit. (1992), *Construction Details*, from Architectural Graphic Standards, The American Institute of Architects, John Wiley & Sons: NJ.

Baden-Powell C. (2001), *Architect's Pocket Book*, 2nd edition, Elsevier: UK.

Ching F. (2012), *A Visual Dictionary of Architecture*, 4th edition, John Wiley & Sons: NJ.

Ching F.-Onouye B.-Zuberbuhler D. (2014), *Building Structures Illustrated. Patterns, Systems, and Design*, 2nd edition, John Wiley & Sons: NJ.

Croney J. (1971), *Anthropometrics for designers*, NY: van Nostrand Reinhold Co.

Goldsmith S. (2000), *Universal Design. A Practical Guidance for Architects*, Routledge: UK.

Royal Institute of British Architects (2011), *A guide for assisting living "towards LifeHome 21"*, UK: RIBA.

Simpson Ian (1994), *The encyclopaedia of drawing techniques*, London: Headline Books.