

3.5 CE0350 – Building Technology

(1) GENERAL

SCHOOL	ENGINEERING SCHOOL		
ACADEMIC UNIT	CIVIL ENGINEERING DEPARTMENT		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CE0350	SEMESTER	3
COURSE TITLE	Building Technology		
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	
	5	5	
<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 Course		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes, in English		
COURSE WEBSITE (URL)	https://eclass.uniwa.gr/modules/auth/opencourses.php?fc=69		

(2) LEARNING OUTCOMES

<p>Learning outcomes <i>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.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i>
<p>The learning outcomes of the course aim to be able to the student for the following (after successful completion):</p> <ul style="list-style-type: none"> • To get acquainted with the design on large scales (1: 5, 1:10, 1:20) of different building details, using analog and modern digital methods. • To understand the stages for completing a construction project. • Understanding the applied procedures and methods of construction of a construction project • Consideration and interpretation of construction according to the rules of art and science, based on current standards and specifications, empirical application practices and current know-how.
<p>General Competences <i>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?;</i></p> <p><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></p> <p><i>Project planning and management</i></p> <p><i>Respect for difference and multiculturalism</i></p>

<i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</i>	<i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>Others...</i>
<p>The course aims at the following general skills:</p> <ul style="list-style-type: none"> • Search, analysis and synthesis of data and information, using the necessary technologies • Promoting free, creative and inductive consideration • Autonomous work • Teamwork 	

(3) SYLLABUS

<p><u>Theoretical Part</u></p> <p>The following issues are taught in the course. These issues are approached through analog and modern digital methods.</p> <ul style="list-style-type: none"> • Design of building details. • Stages of construction of building projects. • Placement - layout of the project on the plot. • Laying of foundation formwork. • Building shell (masonry, coatings, etc.) • Frames. • Floors and ceilings. • Types of insulation and roofs (passable and impermeable). • Roofing. • Scaling. <p><u>Laboratory Part:</u></p> <p>In the laboratory part of the course the theoretical concepts have been taught in Theory are applied.</p>

(4) TEACHING and LEARNING METHODS - EVALUATION

<p style="text-align: center;">DELIVERY</p> <p style="text-align: center;"><i>Face-to-face, Distance learning, etc.</i></p>	<p>Face-to-face</p>
<p style="text-align: center;">USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</p> <p style="text-align: center;"><i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<p>Multimedia material (Videos, Slides, Exercises) organized in the form of a complete website, which provides students with all the interactive files presented in the theoretical part of the course.</p> <p>PowerPoint presentations with a wide variety of dynamic interactive files, posting educational material on the respective website, providing digitized material to students (via website, e-mail, etc.).</p> <p>Presentations through a parametric design program, for the direct supervision of the change of the image of the object, depending on the decisions of handling the object to be displayed.</p> <p>Additional communication via e-mail, exclusive website of the course, support of the learning process by providing selected additional exercises and indicatively solved examples through the website. Support and process management through the electronic platform e-Class.</p>

<p style="text-align: center;">TEACHING METHODS</p> <p><i>The manner and methods of teaching are described in detail.</i></p> <p><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></p> <p><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%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><i>Activity</i></th> <th style="text-align: center;"><i>Semester workload</i></th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">39</td> </tr> <tr> <td>Laboratory Courseworks</td> <td style="text-align: center;">26</td> </tr> <tr> <td>Personal Study</td> <td style="text-align: center;">35</td> </tr> <tr> <td>Teamwork</td> <td style="text-align: center;">30</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td>Course total</td> <td style="text-align: center;">130</td> </tr> </tbody> </table>	<i>Activity</i>	<i>Semester workload</i>	Lectures	39	Laboratory Courseworks	26	Personal Study	35	Teamwork	30			Course total	130
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<p style="text-align: center;">STUDENT PERFORMANCE EVALUATION</p> <p><i>Description of the evaluation procedure</i></p> <p><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></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>Theory:</p> <ul style="list-style-type: none"> • Written Final Examination (60%) which includes problem solving and other crisis questions. • Teamwork (40%) <p>Laboratory:</p> <ul style="list-style-type: none"> • Oral examination in each exercise (50%) • Written Final Examination in the laboratory (50%) • The total grade is formed by the sum of 60% of the grade of Theory and 40% of the grade of the Laboratory. • The evaluation criteria have been presented to the students before the examination, the individual grade of the subjects is written in them and the final grade is accessible through the online platform of the Institution. In addition, students can see their writing and individual grade on the topics, be given clarifications about them and, finally, point out any mistakes they make. • The language of assessment is Greek unless the students come from the Erasmus program, in which case the examination is in English. 														

(5) ATTACHED BIBLIOGRAPHY

<p><u>Greek Bibliography:</u></p> <ol style="list-style-type: none"> 1. Zachariadis A., (2004), Building Technology, University Studio Press publications, Athens (In Greek). 2. Tsinikas N., (2016), Architectural Technology, University Studio Press publications, Athens (In Greek). 3. Kalogeras N. - Kirpotin Ch. - Makris G. - Papaioannou I. - Raftopoulos S. - Tzitzas M. - Touliatos P. / NTUA / Department of Architecture / Department of Technological Advances / Construction (1999), Themes of Construction, Athens: Symmetry. (In Greek). 4. Athanasopoulos Xr. (1991), Construction of buildings, 4th ed., Athens: self-published (In Greek). 5. Fintikakis N., Construction of buildings, Athens: [e.g.] (In Greek). 6. Biris Kypr., (1978), Floors and related constructions, Athens: self-published (In Greek). 7. Fintikakis N. - Bournia R. (1978), Architectural Details, Athens: self-published (In Greek). 8. Fournarakos Gr. (1977), Construction, second edition, 2 volumes, Athens: self-published (In Greek). 9. H. Frey, W. Hellmuth, A. Alievs, (2015), Building Design I, Ion publications (In Greek). 10. H. Frey, W. Hellmuth, A. Alievs, (2015), Building Design II, Ion publications (In Greek). 11. Schmitt Heinrich (1980), Building constructions, translated by Deloukas, Athens: M. Giourdas (In Greek). 12. Neufert E., Construction (1991), translated by D. Malaspinas, Athens: M. Giourdas (In Greek). 13. Schmitt Heindr., Heene A. (1994/1988), Building Constructions: the structural elements and their assembly, translation of the 11th German edition by D. Malaspinas, Athens: M. Giourdas (In Greek). 14. Kourniatis N., (2018), Geometric Representations in Applied Architectural Design, Tziola publications, Thessaloniki (in Greek).
