

COURSE OUTLINE

1. GENERAL

SCHOOL	Of ENGINEERING		
DEPARTMENT	ENVIRONMENTAL ENGINEERING		
LEVEL OF STUDIES	7 th LEVEL		
COURSE CODE	TMC318	SEMESTER	1 st
COURSE TITLE	TECHNICAL DESIGN-CAD		
TEACHING ACTIVITIES <i>If the ECTS Credits are distributed in distinct parts of the course e.g. lectures, labs etc. If the ECTS Credits are awarded to the whole course, then please indicate the teaching hours per week and the corresponding ECTS Credits.</i>	TEACHING HOURS PER WEEK	ECTS CREDITS	
	6	5	
<i>Please, add lines if necessary. Teaching methods and organization of the course are described in section 4.</i>			
COURSE TYPE <i>Background, General Knowledge, Scientific Area, Skill Development</i>	BACKGROUND, GENERAL KNOWLEDGE		
PREREQUISITES:	-		
TEACHING & EXAMINATION LANGUAGE:	GREEK		
COURSE OFFERED TO ERASMUS STUDENTS:	NO		
COURSE URL:	https://eclass.duth.gr/courses/TMC318/		

2. LEARNING OUTCOMES

Learning Outcomes <i>Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.</i>																
The course aims at: <ul style="list-style-type: none"> Acquisition of knowledge for the principles of technical design Learning and using design software 																
General Skills <i>Name the desirable general skills upon successful completion of the module</i>																
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3. COURSE CONTENT

The curriculum covers the following sections:

Technical Design:

- Display of three-dimensional shapes in two dimensions - Basic design principles.
- Using triangles for design- Design of geometric shapes.
- Use of drawing compass – Design of geometric shapes.
- Description of plan – Plan design (pencil).
- Design to scale – Plan design in scale 1:50 (pencil).
- Plan design in scale 1:100 (ink).
- Plan design in scale (ink).
- Section description – Section design.
- Plan and Section design in scale 1: 100 (pencil).
- Plan and Section design in scale (pencil).
- Plan and Section design in scale (ink).
- Plan and Section design in scale (ink).
- Details design.

CAD:

- Computer use
- Presentation of the CAD design software
- Basic design principles in CAD software (relevant and absolute coordinates, decimal, delete, zoom, save, print)
- Design commands in CAD software (line, rectangular, circle, object snap, move, copy, offset, hatch, trim, explode, divide, join, text, dimlinear, ddim)

4. LEARNING & TEACHING METHODS - EVALUATION

<p>TEACHING METHOD <i>Face to face, Distance learning, etc.</i></p>	Face to face, Distance learning (in emergency situations)																			
<p>USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) <i>Use of ICT in Teaching, in Laboratory Education, in Communication with students</i></p>	Use of ICT in Teaching, in Laboratory Education, in Communication with students																			
<p>TEACHING ORGANIZATION <i>The ways and methods of teaching are described in detail.</i> <i>Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliographic research & analysis, Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive learning, Study visits, Study / creation, project, creation, project. Etc.</i></p> <p><i>The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.</i></p>	<table border="1"> <thead> <tr> <th><i>Activity</i></th> <th><i>Workload/semester</i></th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>40</td> </tr> <tr> <td>Laboratory Exercise</td> <td>55</td> </tr> <tr> <td>Preparation of semester work</td> <td>45</td> </tr> <tr> <td>Presentation of work</td> <td>10</td> </tr> <tr> <td>Total</td> <td>150</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	<i>Activity</i>	<i>Workload/semester</i>	Lectures	40	Laboratory Exercise	55	Preparation of semester work	45	Presentation of work	10	Total	150							
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<p>STUDENT EVALUATION <i>Description of the evaluation process</i></p> <p><i>Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Essay / Report, Oral Exam, Presentation in audience, Laboratory Report, Clinical examination of a patient, Artistic interpretation, Other/Others</i></p>	<p><i>The evaluation criteria are posted on the course website (e-class)</i></p>																			

Please indicate all relevant information about the course assessment and how students are informed

5. SUGGESTED BIBLIOGRAPHY

1. Teachers' notes posted on the course website (eclass)
2. Kappos G., (2017). Working with AUTOCAD 2017, Athens: Klidarithmos.
3. Kappos G., (2008). 3D Topographic and Architectural Examples at AUTOCAD, Athens: Klidarithmos.
4. Mouroutsos S., Malliaris G., (2016) Technical Drawing, 3rd Edition, Athens: Tsotras.
5. Sarafis H., Tsebeklis S., Kazanidis O. (2016) Technical Drawing with AUTOCAD in Simple Independent Courses, Dissigma.

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

Teacher (full name):	Argiro Dimoudi, Professor
Contact details:	adimoudi@env.duth.gr
Supervisors: (1)	NO
Evaluation methods: (2)	➤ written examination with distance learning methods, provided that the integrity and reliability of the examination are ensured.
Implementation Instructions: (3)	

(1) Please write YES or NO

(2) Note down the evaluation methods used by the teacher, e.g.

- *written assignment* or/and exercises
- written or oral examination with distance learning methods, provided that the integrity and reliability of the examination are ensured.

(3) In the **Implementation Instructions** section, the teacher notes down clear instructions to the students:

a) in case of **written assignment and / or exercises**: the deadline (e.g. the last week of the semester), the means of submission, the grading system, the grade percentage of the assignment in the final grade and **any other necessary information**.

b) in case of **oral examination with distance learning methods**: the instructions for conducting the examination (e.g. in groups of X people), the way of administration of the questions to be answered, the distance learning platforms to be used, the technical means for the implementation of the examination (microphone, camera, word processor, internet connection, communication platform), the hyperlinks for the examination, the duration of the exam, the grading system, the percentage of the oral exam in the final grade, the ways in which the inviolability and reliability of the exam are ensured and any other necessary information.

c) in case of **written examination with distance learning methods**: the way of administration of the questions to be answered, the way of submitting the answers, the duration of the exam, the grading system, the percentage of the written exam of the exam in the final grade, the ways in which the integrity and reliability of the exam are ensured and any other necessary information.

There should be an attached list with the Student Registration Numbers only of students eligible to participate in the examination.