

COURSE OUTLINE

(1) GENERAL

SCHOOL	ENGINEERING SCHOOL		
DEPARTMENT	CIVIL ENGINEERING DEPARTMENT		
LEVEL OF STUDIES	UNDER GRADUATE		
COURSE CODE	2303510	SEMESTER	3rd
COURSE TITLE	TOPOGRAPHY		
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		2	6
Laboratory		3	
		5	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE	Specialized Knowledge		
<i>general background, special background, specialised general knowledge, skills development</i>			
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek (official)- English (in Erasmus courses)		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	http://pde.teipir.gr/LotusQuickr/2303510/Main.nsf/h_RoomHome/4df38292d748069d0525670800167212/?OpenDocument		

(2) LEARNING OUTCOMES

<p>Learning outcomes</p> <p>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.</p> <p>Consult Appendix A</p> <ul style="list-style-type: none"> • 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 																		
<p>Upon completion of the course, students will have:</p> <ol style="list-style-type: none"> 1. In-depth knowledge and critical understanding of the theory and principles of the use of new technologies and information systems in site surveying. 2. Knowledge and skills in topography. <p>Specifically, topics covered: Introduction and terminology; Simple survey techniques and area calculation; Geodetic instruments and methods of distance measurements; Geodetic instruments and methods of angle measurements; Geodetic instruments and methods of levelling; Global Navigation Satellite Systems; Datum, map projections; Basic geodetic problems; Triangulation.</p>																		
<p>General Competences</p> <p>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?</p> <table border="0"> <tr> <td>Search for, analysis and synthesis of data and information, with the use of the necessary technology</td> <td>Project planning and management</td> </tr> <tr> <td>Adapting to new situations</td> <td>Respect for difference and multiculturalism</td> </tr> <tr> <td>Decision-making</td> <td>Respect for the natural environment</td> </tr> <tr> <td>Working independently</td> <td>Showing social, professional and ethical responsibility and sensitivity to gender issues</td> </tr> <tr> <td>Team work</td> <td>Criticism and self-criticism</td> </tr> <tr> <td>Working in an international environment</td> <td>Production of free, creative and inductive thinking</td> </tr> <tr> <td>Working in an interdisciplinary environment</td> <td>.....</td> </tr> <tr> <td>Production of new research ideas</td> <td>Others...</td> </tr> <tr> <td></td> <td>.....</td> </tr> </table>	Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management	Adapting to new situations	Respect for difference and multiculturalism	Decision-making	Respect for the natural environment	Working independently	Showing social, professional and ethical responsibility and sensitivity to gender issues	Team work	Criticism and self-criticism	Working in an international environment	Production of free, creative and inductive thinking	Working in an interdisciplinary environment	Production of new research ideas	Others...	
Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management																	
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Working independently	Showing social, professional and ethical responsibility and sensitivity to gender issues																	
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Working in an international environment	Production of free, creative and inductive thinking																	
Working in an interdisciplinary environment																	
Production of new research ideas	Others...																	
																	
<p>Search, analysis and synthesis of data and information, using the necessary technologies. Especially: Total Station, GPS.</p> <p>Decision Making: Synthesis and integration of surveying methods.</p> <p>Promoting free, creative and inductive thinking to develop new strategic approaches.</p>																		

(3) Course content

Week No.	Course contents	Hours	
		Course attendance	Preparation
1	Introduction and terminology	4	2
2	Simple survey techniques and area calculation	4	2

3	Geodetic instruments and methods of distance measurements	4	2
4	Geodetic instruments and methods of distance measurements	4	2
5	Geodetic instruments and methods of angle measurements	4	2
6	Geodetic instruments and methods of angle measurements	4	2
7	Geodetic instruments and methods of levelling.	4	2
8	Geodetic instruments and methods of levelling.	4	2
9	Global Navigation Satellite Systems.	4	2
10	Datum, map projections	4	2
11	Basic geodetic problems.	4	2
12	Basic geodetic problems.	4	2
13	Triangulation	4	2
14	Triangulation	4	2

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Lectures, laboratories , distance learning methods	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Teaching using ICT, Laboratory Education using ICT, Communication and Electronic Submission	
TEACHING METHODS <i>The manner and methods of teaching are described in detail. 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. 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>	Activity	Semester workload
	Lectures	26
	Laboratories Exercises	39
	Essay writing	26
	Personal study	59
	Course total	150
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure 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>	Written examination: 60% Laboratory exercise: 40%	

<p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	
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(5) ATTACHED BIBLIOGRAPHY

<p>Graikoysis, G., Lagos A. Principles of Survey and Geoinformation. Synchroni Ekdotiki, Athens, 2011 (in Greek).</p> <p>Badelas, Savaidis, Yfantis and Doukas, Geodesy, Kyriakidis' Publ., Thessaloniki, 2005 (in Greek)</p> <p>X. I. Kaltsikis, A. Fotiou , General Survey: Instruments - measurements –evaluations-rendering, Ziti publ., Thessaloniki, 1990 (in Greek)</p> <p>G.D. Georgopoulos, Survey lectures, Tziola publ., Thessaloniki, 2006 (in Greek)</p> <p>I.N. Chatzopoulos, Survey, Giourda publ., Athens, 2005 (in Greek)</p> <p>Lev M. Bugayevskiy, John P. Snyder , Map projections : a reference manual, London ; Philadelphia : Taylor & Francis, 1998</p>
