

COURSE OUTLINE

1. GENERAL

SCHOOL	School of Applied Technology		
DEPARTMENT	ENVIRONMENTAL ENGINEERING		
LEVEL OF STUDY	UNDERGRADUATE		
COURSE UNIT CODE	GETA 229	SEMESTER OF STUDY	5 ^o
COURSE TITLE	GEOTECHNICAL PROJECTS-BARRIERS AND TUNNELS		
COURSEWORK BREAKDOWN		TEACHING WEEKLY HOURS	ECTS Credits
Theory and laboratory		6 (3+3)	5
COURSE UNIT TYPE	Compulsory Unit		
PREREQUISITES :	No requirements		
LANGUAGE OF INSTRUCTION/EXAMS:	Greek		
COURSE DELIVERED TO ERASMUS STUDENTS	NO		
MODULE WEB PAGE (URL)	http://eclass.teiwm.gr/courses/GETA229/		

2. LEARNING OUTCOMES

Learning Outcome		
<p>The course aims to provide necessary knowledge relevant to the science and profession of the geoenvironmental engineer, so that the students will be able to cope with relevant subjects and especially with:</p> <ol style="list-style-type: none"> 1. Understanding of the introductive legal basis in the framework of technical works. 2. Application and handling of the construction law. 3. Understanding of the framework of the Eurocodes. 4. Development and writing of technical specifications. 		
<p>General Skills <i>Upon successful completion of the programme students will:</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><i>-have the basic theoretical and practical knowledge in the fields of the subject area of Geotechnology and Environmental Engineering</i></td> <td style="width: 50%; border: none;"><i>-have the basic theoretical and practical knowledge in the fields of the subject area of Geotechnology and Environmental Engineering</i></td> </tr> </table>	<i>-have the basic theoretical and practical knowledge in the fields of the subject area of Geotechnology and Environmental Engineering</i>	<i>-have the basic theoretical and practical knowledge in the fields of the subject area of Geotechnology and Environmental Engineering</i>
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<ul style="list-style-type: none"> • Independent Work • Teamwork • Work in a multidisciplinary environment • Design and project management • Respect the natural environment • Search, analyze and synthesize data and information, and the use of essential technologies 		

3. COURSE CONTENTS

<ul style="list-style-type: none"> • Basic principles of the law.
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- Greek construction law framework.
- European construction law framework.
- Basic principles and structure of the Eurocodes.
- Interconnection of the Geoenvironmental Engineer with the Eurocodes.
- Actions on structures. Eurocode 1,7,8.
- Geostatic-geoenvironmental design of the technical works.
- Case studies.

4. TEACHING METHODS - ASSESSMENT

MODE OF DELIVERY	In classroom, face to face lectures and seminars.	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY	<ul style="list-style-type: none"> • Lectures assisted by power point presentations and group comprehension exercises. Educational tours and excursions. • Contact between instructor and students via email. 	
TEACHING METHODS	<i>Method description</i>	<i>Semester Workload</i>
	Classroom lectures	40
	Laboratory exercises	25
	Collaborative teamwork	25
	Independent and Directed Study	35
Total work load hours of lesson	125	
ASSESSMENT METHODS <i>Description of the evaluation process</i> <i>Public Presentation, Laboratory Work, Laboratory Examination - Interpretation, Language Assessment, Evaluation Methods, Formative or Concluding, Multiple Choice Test, Short-Answer questions, Test Development Questions, Troubleshooting, Written Work, Report / Essay, Oral Examination, Other.</i> <i>Referred to explicitly defined evaluation criteria and whether and which are accessible to students.</i>	<p>Formally written examination at the end of the semester on the theoretical background, oral presentations in classroom and assessment of laboratory exercises & skills on selected topics.</p> <p>Laboratory and / or Coursework: 40.00%, Formal examination at the end of the semester: 60.00%.</p>	

5. Proposed Literature / Bibliography

1. Παρούσης Μιχαήλ. "Φιλοσοφία του Δικαίου". Ανοικτά Ακαδημαϊκά Μαθήματα. Τμήμα Φιλοσοφίας, Πανεπιστήμιο Πατρών.
2. Μαρχαβίλας Π. "Στοιχεία Δικαίου & Τεχνική Νομοθεσία". Μηχανικών Παραγωγής και Διοίκησης. Δημοκρήτειο Πανεπιστήμιο Θράκης.
3. Ράικος Δ. "Δίκαιο Δημοσίων Συμβάσεων". Εκδόσεις Σάκκουλα, 2014. ISBN/ISSN 978-960-568-148-7.
4. The EN Eurocodes. <http://eurocodes.jrc.ec.europa.eu/>
5. The European Committee for Standardization. <https://www.cen.eu/Pages/default.aspx>
6. Ερμόπουλος Ι. "Ευρωκώδικας 1". Εκδόσεις Κλειδάριθμος, 2005. ISBN 9602098953
7. Μαλακάτας Ν., Τρέζος Κ. "EN 1990-Βάσεις σχεδιασμού & EN 1991 Δράσεις στις

φέρουσες κατασκευές''. Εκπαιδευτικές σημειώσεις. Τεχνικό Επιμελητήριο Ελλάδας.

8. Trevor L.L. Orr. (2002) How Eurocode 7 has affected geotechnical design: a review. Proceedings of the Institution of Civil Engineers Geotechnical Engineering 165 December 2012 Issue GE6

9. Ελληνικές Τεχνικές Προδιαγραφές. ΦΕΚ Β' 2221/30-7-2012

10. New ISO technical specification to green civil engineering works.
<http://www.iso.org/iso/news.htm?refid=Ref1979>