

COURSE OUTLINE

1. GENERAL

SCHOOL	APPLIED SCIENCES		
DEPARTMENT	Environmental Engineering		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	GE0211	SEMESTER OF STUDY	2
COURSE TITLE	Applied Mathematics		
COURSEWORK BREAKDOWN		TEACHING WEEKLY HOURS	ECTS Credits
Lectures		4	6
COURSE UNIT TYPE	GBC: General Background Courses		
PREREQUISITES :	Mathematics I		
LANGUAGE OF INSTRUCTION/EXAMS:	Greek		
COURSE DELIVERED TO ERASMUS STUDENTS			
MODULE WEB PAGE (URL)			

2. LEARNING OUTCOMES

Learning Outcomes

On successful completion of this module the learner will be able to handle the basic mathematical tools of the differential and integral calculus of many variables and differential equations as well, in order to face problems intervening in the study on subjects of the department.

General Skills

Upon successful completion of the programme students will: - have the basic theoretical and practical knowledge in the fields of the subject area of Geotechnology and Environmental Engineering - be able to properly apply the theoretical and practical knowledge acquired during the study period - be able to cover a wide spectrum of scientific and technical knowledge related to mining and geotechnical projects as well as the sector of environmental reclamation - have gained the necessary competencies to proceed to their second cycle study

- Analysis and synthesis of data and information by using relative technologies.
- Autonomous work
- Collective work
- Interdisciplinary working conditions.

3. COURSE CONTENTS

Differential calculus of functions with many variables .Partial derivatives.
Extremities.
Integral calculus. Applications of multiple integrals.
Introduction to differential equations.
Elements of Numerical Analysis

4. TEACHING METHODS - ASSESSMENT

MODE OF DELIVERY	Face to face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY		
TEACHING METHODS	<i>Method description</i>	<i>Semester Workload</i>
	Lecture	4
	Homework	3
ASSESSMENT METHODS	Written examination in the first and second half of the taught matter and final examination at the semester end.	

5. RESOURCES

- *Recommended Book Resources:*
- *Recommended Article/Paper Resources:*
- Συναρτήσεις Πολλών Μεταβλητών. Αναστασάτος, Αναστασίου, Γαγαλής, Κομισόπουλος.
-Αριθμητική Ανάλυση. Κικίλιας, Λαμπίρης, Πετράκης.
-Λογισμός Συναρτήσεων Πολλών Μεταβλητών και Διαφορικές Εξισώσεις. Τερζίδης Χαράλαμπος.