

COURSE OUTLINE

1. GENERAL

SCHOOL	APPLIED SCIENCES		
DEPARTMENT	Department of Environmental Engineers/ Division of Environmental Geo-technology Engineering		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	GE5760	SEMESTER OF STUDY	7th
COURSE TITLE	Mining Law – Health & Safety in open pit & underground exploitation		
COURSEWORK BREAKDOWN		TEACHING WEEKLY HOURS	ECTS Credits
Lectures, Laboratory Exercises		4	5
COURSE UNIT TYPE	SC: Specialization Courses		
PREREQUISITES :	None		
LANGUAGE OF INSTRUCTION/EXAMS:	Greek		
COURSE DELIVERED TO ERASMUS STUDENTS	Yes		
MODULE WEB PAGE (URL)	http://geope.teikoz.gr/undergraduate/ug_studies.htm		

2. LEARNING OUTCOMES

Learning Outcomes
<p>The course aims to familiarize students with:</p> <ul style="list-style-type: none"> • General principles of mining and quarry law, relevant legislations, and also means and preconditions to issue mineral research licences for mining and quarry projects • Safety and health measures in open pit and underground exploitations • How to approach and investigate the dangerous in the working environment • Means used for the elaboration of written estimation about professional hazard • Methods and ways of accident indexes evaluation in working environment • Methods and ways for the analysis and investigation for accidents • Means for the elaboration of safety and health program
<p>General Skills Upon successful completion of the programme students will:</p> <ul style="list-style-type: none"> - 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

On successful completion of this module the learner will be able to :

1. To write a risk assessment study for an open pit or underground mining exploitation.
2. To know the basic health and safety rules for an open pit or an underground exploitation.
3. To be able to work as a Safety Engineer in open pit and underground exploitations.

3. COURSE CONTENTS

Risk assessment analysis, classification of the risks in the working environment, methods for the risk assessment evaluation. Organization & management of the Health and Safety in a technical project. Fire safety – fire protection, critical parameters for the creation of a fire, consequences of a fire, law, fire protection study. Health and safety in open pit exploitations, mining equipment, equipment for excavation and loading, continuous transportation, safety operation of the installations, safety rules for storage of the explosives, general rules for the safety open – pit conditions. Health and safety in underground exploitations, training, safety controls, explosive gases, distribution and use of the electric current, accident – incidents, accident causes – accident investigation.

Principles of mining and quarry laws, N.669/1977, N.998/1979, N.1428/84, C.M.Q.W.

4. TEACHING METHODS - ASSESSMENT

MODE OF DELIVERY	Face – to - face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY	Power point presentations and self-assessment test in the Blackboard. Students are contacted by e-mail.	
TEACHING METHODS	<i>Method description</i>	<i>Semester Workload</i>
	Lectures	45
	Field Work	10
	Laboratory Exercises	45
	Autonomous Study	25
	Total	125
ASSESSMENT METHODS	Written Examination, Oral Presentation, tests, written assignments. 1. Each lab exercise is examined orally and by a written test. The laboratory examination of each subject must be successful. 2. At the end of each lecture, students are asked to answer a number of questions related to the lecture. 3. For the final grade counts the performance in the laboratory exercises (45%), the field work (10%) and the written exam at the end (45%).	

5. RESOURCES

- Recommended Book Resources:

1. AIME : "Surface Mining" 2nd Ed. Kennedy 1990
2. Hartman H. "Introductory Mining Engineering" New York 2nd Edition 2002.
3. Hustrulid W.A. 1982 Underground Mining Methods Handbook Littleton, CO Society for Mining, Metallurgy and Exploration.

4. Kennedy B. A. (ed.): 'Surface mining. 2nd edition', AIME, Society of mining Engineers Inc., Littleton, Colorado, 1990.

5. S. Platias «Notes of the lesson Mining Law – Health and Safety in open pits and underground exploitations» TEI of Western Macedonia , 2011