

COURSE OUTLINE

(1) GENERAL

SCHOOL	ENGINEERING		
ACADEMIC UNIT	MINERAL RESOURCES ENGINEERING		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	MRE702	SEMESTER	7 th
COURSE TITLE	MINERAL PROCESSING METHODS		
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	2
LABORATORY EXERCISES		2	2
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	COMPULSORY -SPECIALIZED KNOWLEDGE		
PREREQUISITE COURSES:	NO		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK		
IS THE COURSE OFFERED TO ERASMUS STUDENTS			
COURSE WEBSITE (URL)	https://mre.uowm.gr/wpcontent/uploads/sites/6/2020/09/MON702.pdf		

(2) LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>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.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i>
<p>After the successful attendance of the course students will be able to:</p> <ol style="list-style-type: none"> 1. Understand the main concepts of mineral processing 2. Recognize and use the mineral processing equipment 3. Describe the procedures of mineral processing 4. Discern the essential facts and characteristics of the various minerals 5. Combine the various methods of mineral processing, so that the processing of a complex mineral is feasible
<p>General Competences</p> <p><i>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?</i></p>

Search for, analysis and synthesis of data and information, with the use of the necessary technology
Adapting to new situations
Decision-making
Working independently
Team work
Working in an international environment
Working in an interdisciplinary environment
Production of new research ideas

Project planning and management
Respect for difference and multiculturalism
Respect for the natural environment
Showing social, professional and ethical responsibility and sensitivity to gender issues
Criticism and self-criticism
Production of free, creative and inductive thinking
.....
Others...
.....

After the successful attendance of the course students will be able to:

- **Design a mineral processing installation.**
- **Acquire the ability to install a flow chart.**
- **Comprehend the complexity of a mineral processing procedure and discern the sequence of applying the various methods.**
- **Recognize which method of mineral processing is the most appropriate for the various categories of minerals.**

(3) SYLLABUS

- Mass balance, degree of separation, particle size and measurement methods.
- Segmentation, segmentation machines, segmentation circuits.
- Classification according to size, sieving, water classification, air classification.
- Separation of liquids or gases from solids, thickening, filtration, drying.
- Power supply, solids and pulp handling.
- Release.
- Sampling.
- Optical separation.
- Gravimetric methods.
- Magnetic separation.
- Electrostatic separation.
- Flotation, extraction, waste disposal.

(4) TEACHING and LEARNING METHODS – EVALUATION*

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of ICT in teaching, laboratory education, communication with students	
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
	Laboratory Practice	26
	Independent & Guided learning	45
	Educational visits	23
	Course total	120
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 Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	Language of assessment: Greek Methods of evaluation: <ul style="list-style-type: none"> • Formative • Multiple choice questionnaires • Short-answer questions • Written assignment • Essay/Report • Oral examination • Practice assignment • Public Presentation 	

(5) SUGGESTED BIBLIOGRAPHY

<p><i>- Suggested bibliography:</i></p> <ul style="list-style-type: none"> • Εμπλουτισμός Πρωτογενών & Δευτερογενών Υλικών, Σεραφείμ Σαββίδη, 2014, ISBN: 978-869-80374-1-0. • Εμπλουτισμός Στερεών Αποβλήτων – Τεχνολογίες Ανακύκλωσης, Σεραφείμ Σαββίδη, ΑΛΕΞΑΝΔΡΟΣ ΙΚΕ, 2019, ISBN: 978-618-84448-7-4 .
--