COURSE OUTLINE

1. GENERAL

SCHOOL	FACULTY OF ENGINEERING			
DEPARTMENT	ELECTRICAL AND COMPUTER ENGINEERING			
LEVEL OF STUDY	POSTGRADUATE			
COURSE UNIT CODE	SEMESTER OF STUDY 1°			
COURSE TITLE	Mechanical Behaviour			
COURSEWORK BREAKDOWN		TEACHING WEEKLY HOURS	ECTS Credits	
		Lectures	3	6
COURSE UNIT TYPE	SCIENTIFIC AREA			
PREREQUISITES :				
LANGUAGE OF INSTRUCTION/EXAMS:	Greek			
COURSE DELIVERED TO ERASMUS STUDENTS	NO			
MODULE WEB PAGE (URL)	https://mechatronics.uowm.gr/			

2 LEARNING OUTCOMES

Learning Outcomes

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

1. Have knowledge of standard methods of identifying typical engineering sizes

2. Have knowledge of equipment of mechanical strength- materials

- 3. Carry out technical tasks-technical studies-standards
- 4. Come to conclusions concerning the mechanical behavior of materials

General Skills

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

• have a complete knowledge of the Mechanical Behavior of Materials under stress

• identify characteristic strength of Materials through standardized exercises on tensile, compression, fatigue, impact, bending stresses

have the potential to creatively utilize scientific knowledge and its

state-of-the-art technology and mechanical calculations

and diagrams to arrive at conclusions

3. COURSE CONTENTS

Mechanical materials, stresses, units of measure, safety factor, necessity of testing, standardization

- Simple, complex, dynamic strains
- Bending
- Hooke's law elastic constants, a measure of elasticity
- Tension
- Fatigue
- Torsion
- Fatigue
- Impact

4. TEACHING METHODS - ASSESSMENT

MODE OF DELIVERY	On line lectures and case studies of mechanical materials and equipment and standardized technical studies with the guidance and evaluation of the teacher		
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY	- Lecturres using supervisory means		
	 Electronic communication for additional guidance 		
TEACHING METHODS	Method description	Semester Workload	
	Lectures Total (25 working hours per	125	
	credit unit)		
	Written final grade assessment of 100%		

RESOURCES 5.

-Suggested Bibliography:

- Τεχνική Μηχανική, Αντοχή των Υλικών Π.Α. Βουθούνης ISBN 960-85431-4-2 British Standards 2005, Strength of Materials ٠
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