

COURSE OUTLINE

(1) GENERAL INFORMATION

SCHOOL	FACULTY OF ENGINEERING		
DEPARTMENT	ELECTRICAL AND COMPUTER ENGINEERING		
LEVEL OF STUDIES	POSTGRADUATE		
COURSE CODE	B1	SEMESTER	2nd
COURSE TITLE	Mechatronics Project		
COURSEWORK BREAKDOWN		TEACHING WEEKLY HOURS	ECTS CREDITS
(e.g., lectures/laboratory work)		6	10
<i>Add extra space if necessary</i>			
COURSE TYPE Scientific field <i>special knowledge</i> Development of special skills	Compulsory		
PREREQUISITES:			
LANGUAGE OF INSTRUCTION and EXAMS:	Greek		
COURSE AVAILABLE TO ERASMUS STUDENTS:	no		
COURSE WEB PAGE (URL)	https://eclass.uowm.gr/courses/MPE104/		

(2) LEARNING OUTCOMES

Learning Outcomes
<p>Upon successful completion of the course, students will acquire knowledge and understanding of the following topics:</p> <ul style="list-style-type: none"> - Understanding of the mechatronic approach to system design. - In-depth understanding of the concepts of the approach to mechanical systems design - In-depth understanding of the concepts of mechanical engineering and the understanding of the principles of mechanical engineering, including the understanding of the concepts of automation, sensors and other electronic devices in integrated systems.
General Skills

Searching, analysing and synthesising data and information, using the necessary technologies.
Decision-making.
Teamwork.
Generating new research ideas
Project planning and management

(3) COURSE CONTENT

Extensive team study and design of an electromechanical system using mechatronic design methods. The study includes detailed specifications, mechanical analysis and design, electrical and energy analysis and design, selection and connection of electronic subsystems, simulation of system operation and an economic and technical study.

(4) TEACHING and LEARNING METHODS - ASSESSMENT

COURSE DELIVERY MODE <i>lectures, face-to-face, distance learning etc.</i>	Lectures and tutorials	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY <i>e.g. use of audiovisual media and computers etc.</i>	<ul style="list-style-type: none"> Support of learning process through e-class platform. 	
TEACHING METHODS <i>Derailed description of the teaching methods used:</i> <i>Lectures, Seminars, Laboratory exercises, Study & bibliography analysis, Tutoring, Internship/Practicum, Art Workshop, Interactive Teaching, Projects, Written Assignments, Artistic creation etc.</i> <i>Study hours for each learning activity are included along with the non-guided study hours according to the ECTS principles</i>	Method Description	Semester workload
	Lectures	50
	Team Project	200
	Total	250
ASSESSMENT METHODS AND CRITERIA <i>Description of the assessment methods and criteria:</i> <i>Language of Assessment, Assessment Methods, Formative or Concluding Assessment, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Reports, Oral Exam, Essay, Oral Presentation, Clinical Examination of patient, Artistic Performance, Others</i> <i>Assessment criteria are explicitly defined and stated.</i>	Group work 80% Final Oral Examination 20%	

(5) RECOMMENDED BIBLIOGRAPHY

- Recommended Bibliography:

Dan Neculescu, "Mechatronics", Εκδόσεις Τζιόλα.