



T.C. ESKİŞEHİR OSMANGAZİ UNIVERSITY
ARCHITECTURE AND ENGINEERING FACULTY
MECHANICAL ENGINEERING DEPARTMENT

COURSE INFORMATION FORM

SEMESTER Spring

COURSE CODE	151812202	COURSE NAME	Physics Laboratory II (A)
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
1	0	0	2	1	2	COMPULSORY (x) ELECTIVE ()	English
COURSE CATAGORY							
Basic Science		Basic Engineering		Mechanical Engineering [if it contains considerable design, mark with (√)]			Social Science
X				()			
ASSESSMENT CRITERIA							
MID-TERM			Evaluation Type		Quantity		%
			Mid-Term				
			Quiz				
			Homework				
			Project				
			Report		7		50
			Others (.....)				
FINAL EXAM					1		50
PREREQUIEITE(S)							
COURSE DESCRIPTION			Electrolysis, Magnetic force, Ohm’s Law, Wheatstone Bridge, Resonance tube and stable waves, Transformers, Absorption of light.				
COURSE OBJECTIVES			The main objective of the course is to strengthen insights into the fundamental concepts of physics related to Newtonian mechanics through direct investigations and provide hands-on experience.				
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION			Students will be able to analyze the data related to a scientific topic, and they will have some capabilities about how to make and design an experiment. They will also develop their team skills.				
COURSE OUTCOMES			1. Enhance observational and analytical skills and develop physical curiosity. 2. Develop team skills. 3. Make observations and measurements of physical phenomena. 4. Draw conclusions based on observations and data. 5. Analyze quantitative information using sketches, graphs, tables, and statistical methods, and write report.				
TEXTBOOK			Eroğlu, S., Kellegöz M., Kılıç G., Adıyaman H., 2008, Physics II Laboratory Manual, ESOĞÜ Yayınları, Eskişehir.				
OTHER REFERENCES			1. Ekem, N., Şenyel, M., 1997, Fizik I-II Deneyleri, ESOĞÜ. Yay. No:023, Eskişehir. 2. Any equivalent books in related fields.				
TOOLS AND EQUIPMENTS REQUIRED							

COURSE SYLLABUS	
WEEK	TOPICS
1	Laboratory presentation and forming the lab experiment groups
2	Electrolysis
3	Electrolysis
4	Ohm's Law
5	Ohm's Law
6	Magnetic force
7	Wheatstone Bridge
8	Mid-Term Examination
9	Mid-Term Examination
10	Wheatstone Bridge
11	Resonance tube and stable waves
12	Transformers
13	Absorption of light
14	Make up experiments
15,16	Final Exam

NO	PROGRAM OUTCOMES	1	2	3
1	Sufficient knowledge of engineering subjects related with mathematics, science and mechanical engineering; an ability to apply theoretical and practical knowledge on solving and modeling of mechanical engineering problems.	[]	[]	[x]
2	Ability to determine, define, formulate and solve complex mechanical engineering problems; for that purpose an ability to select and use convenient analytical and experimental methods.	[]	[x]	[]
3	Ability to design a complex system, a component and/or an engineering process under real life constraints or conditions, defined by environmental, economical and political problems; for that purpose an ability to apply modern design methods.	[]	[x]	[]
4	Ability to develop, select and use modern methods and tools required for mechanical engineering applications; ability to effective use of information technologies.	[x]	[]	[]
5	In order to investigate mechanical engineering problems; ability to set up and conduct experiments and ability to analyze and interpretation of experimental results.	[]	[]	[x]
6	Ability to work effectively in inner or multi-disciplinary teams; proficiency of interdependence.	[]	[]	[x]
7	Ability to communicate in written and oral forms in Turkish/English; proficiency at least one foreign language.	[x]	[]	[]
8	Awareness of life-long learning; ability to reach information; follow developments in science and technology and continuous self-improvement.	[]	[]	[x]
9	Understanding of professional and ethical issues and taking responsibility	[x]	[]	[]
10	Awareness of project, risk and change management; awareness of entrepreneurship, innovativeness and sustainable development.	[x]	[]	[]
11	Knowledge of actual problems and effects of engineering applications on health, environment and security in global and social scale; an awareness of juridical results of engineering solutions.	[x]	[]	[]
1:None. 2:Partially contribution. 3: Completely contribution.				

Prepared by: Yrd.Doç.Dr. Sertaç Eroğlu

Date:

Signature(s):