

AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Physics II							
Course Code		FBÖ150		Couse Level		First Cycle (Bachelor's Degree)			
ECTS Credit	3	Workload	75 (Hours)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		The aim of this electricity, mag between these with the help of	s course is; si gnetism and t e concepts an of open and c	tudents will be hermodynam id principles t losed end exp	e able to u iics from th hrough dai periments f	nderstand the l e basic subjec ly and daily ap for these subje	basic concept ts of physics a plications of e cts.	s and principles of and to establish r lectricity and ma	of elations gnetism
Course Content		Charge and co continuous an difference, inte current (current measuring ins with current pa matter, electron generators, ele yield and entro	onservation, e d continuous ermittent and nt, power sou truments, ele assing conduc magnetic ind ectric motors, opy) and oper	electrification, loads; Gauss continuous lo rces, emf, res ctricity use ar ctors and mov uction (Farad transformers and closed	insulators a law; static bads, dieled sistances, e nd safety); ving loads, lay law, Le s, thermody end experi	and conductor charge potent ctrics, coupling energy and pov magnetic force Law of Biot-Sa nz law, self ind ynamic laws, re ments for these	rs, Coulomb's tial potential (p and energy ir wer, direct cur and field (ma avart, Hall effe luction, magne eversible and i e subjects.	law, electric field potential, potentia reapacitors); diru- rent circuits, stru- ignetic field inter- ect, magnetic pro- etic field energies rreversible phen	ls of al ect icture of action perties of s, AC omena,
Work Placement		N/A							
Planned Learning Activities and Teaching Methods			Discussion,	Project Ba	sed Study, Ind	lividual Study			
Name of Lecturer(s)									

Assessment Methods and Criteria							
Method		Quantity	Percentage (%)				
Midterm Examination		1	40				
Final Examination		1	60				

Recommended or Required Reading

 2 Üniversite Fiziği Cilt II, Young & Freedman, Pearson Education Yayıncılık 3 Fen ve Mühendislik İçin Fizik: Elektrik ve Manyetizma-Işık ve Optik, Serway & Beichner, Palme Yayıncılık 	1	Genel Fizik, Ergin, Ö., Dinozor Yayınevi
3 Fen ve Mühendislik İçin Fizik: Elektrik ve Manyetizma-Işık ve Optik, Serway & Beichner, Palme Yayıncılık	2	Üniversite Fiziği Cilt II, Young & Freedman, Pearson Education Yayıncılık
	3	Fen ve Mühendislik İçin Fizik: Elektrik ve Manyetizma-Işık ve Optik, Serway & Beichner, Palme Yayıncılık

Weekly Detailed Cours	se Contents
Theoretical	Load and protection, electrification, insulators and conductors
Theoretical	Coulomb's law, electric fields of continuous and continuous loads
Theoretical	Gauss law; static charge potential potential (potential, potential difference, intermittent and continuous loads, dielectrics, coupling and energy in capacitors)
Theoretical	direct current; current, power sources
Theoretical	emf, resistances, energy and power,
Theoretical	direct current circuits, structure of measuring instruments, electricity use and safety
Theoretical	magnetic force and field (magnetic field interaction with current passing conductors and moving loads)
Intermediate Exam	Midterm
Theoretical	Law of Biot-Savart, Hall effect
Theoretical	magnetic properties of matter,
Theoretical	electromagnetic induction (Faraday law,
Theoretical	Lenz law, self induction, magnetic field energies
Theoretical	AC generators, electric motors, transformers
Theoretical	thermodynamic laws
Theoretical	reversible and irreversible phenomena, yield and entropy) and open and closed end experiments for these subjects
Final Exam	Final
	Weekly Detailed Cours Theoretical Theoretical Theoretical Theoretical Theoretical Theoretical Intermediate Exam Theoretical Intermediate Exam Theoretical Theoretical Theoretical Theoretical Theoretical Theoretical Final Exam



Workload Calculation								
Activity	Quantity	Preparation	Duration	Total Workload				
Lecture - Theory	14	1	2	42				
Midterm Examination	1	13	2	15				
Final Examination	1	16	2	18				
	75							
	3							

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Load and protection, electrification, insulators and conductors.
2	Coulomb law, electric fields of continuous and continuous loads; Gauss law
3	Static charge potential potential (potential, potential difference, intermittent and continuous loads, dielectrics, bonding and energy in capacitors).
4	Direct current (current, power sources, emf, resistances, energy and power, direct current circuits, structure of measuring instruments, electricity usage and safety).
5	Magnetic force and field (magnetic field interaction with current passing conductors and moving charges, Biot-Savart law, Hall phenomenon, magnetic properties of matter.
6	Electromagnetic induction (Faraday's law, Lenz law, selfinduction, magnetic field energy, AC generators, electric motors, transformers, heat and temperature, thermal properties of the material (core heat, thermal conductivity, thermal expansion).
7	Thermodynamic laws, reversible and irreversible phenomena, efficiency and entropy) and open and closed end experiments for these subjects.

Programme Outcomes (Science Teacher Education)

•	
1	To be able to gain subject knowledge of profession in theory and practice in the learning process.
2	To be able to gain the competence of using the appropriate approach, strategy, method and technique for the instructional plans to be prepared in the learning process.
3	To be able to gain the skills of the teaching profession in the learning process.
4	To be able to implement teaching profession knowledge, skills, attitudes and habits related to the subject-matter in a real teaching and learning environment in the learning process.
5	To be able to comprehend contemporary approaches of education and the philosophy they are based on.
6	To be able to gain the basic skills such as comprehending, expressing, commenting, evaluating, being aware and enterprising, communicating, acknowledging the individual related to the subject-matter.
7	To be able to become individuals faithful to the Principles and Revolutions of Ataturk, be modern democratic, secular, protecting and deveoping one's country, being alive to the nation, respecting human rights, preserving the nature, not being discriminatory, giving importance to the traditions and customs, protecting the values
8	To be able to improve oneself in terms of sport, art and culture.
9	To be able to become individuals believing in lifelong learning.
10	To be able to gain the vision of being individuals who keep up with developments in social, economic, technological and scientific areas, who investigate the main reasons of World problems and try to contribute to the solutions of these problems.

Contribution of Learning Outcomes to Programme Outcomes 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

	L1	L2	L3	L4	L5	L6	L7
P1	5	5	5	5	5	5	5
P2	5	5	5	4	4	4	5
P3	4	5	5	5	5	4	5
P4	5	4	5	4	4	4	4
P5	4	5	4	5	4	5	4
P6	5	4	5	4	5	4	4
P7	4	5	4	5	5	5	4
P8	5	4	5	4	5	4	5
P9	4	4	4	4	5	4	4
P10	4	4	4	4	4	5	5

