

PHYSICS III

1	Course Title:	PHYSICS III
2	Course Code:	FEN2201
3	Type of Course:	Compulsory
4	Level of Course:	First Cycle
5	Year of Study:	2
6	Semester:	3
7	ECTS Credits Allocated:	3.00
8	Theoretical (hour/week):	2.00
9	Practice (hour/week):	2.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Doç. Dr. SEZER ERDEM
15	Course Lecturers:	Doç. Dr. Sezer ERDEM
16	Contact information of the Course Coordinator:	serdem@uludag.edu.tr, 0 224 2941772, Uludağ Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Bölümü, Görükle Kampüsü, 16059 Nilüfer/Bursa.
17	Website:	
18	Objective of the Course:	1) Basic information about the thermodynamics is given and the laws of thermodynamics are taught. 2) Geometric optics and physical optics are explained and related equations are taught. 3) Basic information about alternating current circuits and electromagnetic waves is given.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	
	1	To be able to understand the basic concepts and laws of thermodynamics, and to solve related problems.
	2	To be able to understand relationship among the pressure, volume and temperature of a gas.
	3	To be able to learn basic information and equations about geometric optics.
	4	To be able to learn basic information and equations about physical optics.
	5	To be able to understand alternating current circuits and to necessary relations.
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21	Course Content:	
	Course Content:	
Week	Theoretical	Practice

1	Temperature and Zeroth Law of Thermodynamics	Preparation
2	Ideal Gases	Error Calculations
3	Heat and First Law of Thermodynamics	Joule Law
4	Applications of First Law of Thermodynamics	Solving Problem
5	Second Law of Thermodynamics	Solving Problem
6	Entropy	Solving Problem
7	Nature and Spreading of Lighth	Solving Problem
8	Geometrical Optics - I (Mirrors)	Mirrors
9	Geometrical Optics - I (Lenses)	Lenses
10	Physical Optics - I (Interference)	Young Experiment
11	Physical Optics - I (Diffraction)	Refraction and Interference in Water
12	Alternating Current Circuits	Solving Problem
13	RLC Circuit	Solving Problem
14	Electromagnetic Waves	Electromagnetic Waves

22	Textbooks, References and/or Other Materials:	1. Physics for Scientists and Engineers, Raymond A. SERWAY, Robert J. Beichner. 2. Physics for Scientists and Engineers, Paul M. FISBANE, Stephen GASIOROWICZ, Stephen T. THORNTON. 3. Sears and Zemansky's University Physics, Hugh D. YOUNG, Roger A. FREEDMAN.
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Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical	R	14	2.00	28.00
Midterm Exam	1	40.00		
Practicals/Labs		14	2.00	28.00
Self study and preperation	0	14	1.00	14.00
Homework project	0	0.00		
Homeworks		8	2.00	16.00
Final Exam	1	0.00	0.00	0.00
Projects	0	40.00		
Field Studies		0	0.00	0.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00	2.00	2.00
Others		0	0.00	0.00
Final Exams	1	2.00	2.00	2.00
Total		40.00		
Total Work Load				90.00
Measurement and Evaluation Techniques Used in the Course				3.00
ECTS Credit of the Course				3.00

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	5	5	0	0	4	0	0	0	4	0	0	0	0	0	0	0
ÖK2	5	4	0	0	4	0	0	0	4	0	0	0	0	0	0	0
ÖK3	4	3	0	0	4	0	0	0	4	0	0	0	0	0	0	0
ÖK4	4	3	0	0	4	0	0	0	3	0	0	0	0	0	0	0

ÖK5	4	3	0	0	4	0	0	0	3	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib ution Level:	1 very low		2 low		3 Medium		4 High		5 Very High							