THERMODYNAMICS											
1	Course Title:	THERMO	DDYNAMICS								
2	Course Code:	FZK2405	5								
3	Type of Course:	Optional									
4	Level of Course:	First Cyc	le								
5	Year of Study:	2									
6	Semester:	3									
7	ECTS Credits Allocated:	5.00									
8	Theoretical (hour/week):	3.00									
9	Practice (hour/week):	0.00									
10	Laboratory (hour/week):	0									
11	Prerequisites:	None									
12	Language:	Turkish									
13	Mode of Delivery:	Face to f	ace								
14	Course Coordinator:	Doç. Dr.	SEZER ERDEM								
15	Course Lecturers:										
16	Contact information of the Course Coordinator:	serdem@uludag.edu.tr, 0 224 2941772, Uludağ Üniversitesi, Fen Edebiyat Fakültesi, Fizik Bölümü, Görükle Kampusü, 16059 Nilüfer/Bursa									
17	Website:										
18	Objective of the Course:	Basic information about the thermodynamics is given and the laws of thermodynamics are taught to the students.									
19	Contribution of the Course to Professional Development:	Understanding the basic topics of Thermodynamics course, associating with current issues and explaining.									
20	Learning Outcomes:										
		1	Learn the basic concepts of thermodynamics and the relations between these concepts.								
		2	Learn the difference between heat and temperature.								
		3	Learn the relationship among the pressure, volume and temperature of a gas.								
		4	Learn the laws of thermodynamics and apply them to the problems.								
		5	Have knowledge about heat engines.								
		6	Learn the concept of entropy and the application of it to the thermodynamic processes.								
		7									
		8									
		9									
		10									
21	Course Content:										
		Co	urse Content:								
Week	Theoretical		Practice								
1	Basic Concepts of Thermodynamics										
2	Temperature and Heat										
3	The Zeroth Law of Thermodynamics										
4	Thermal Expansion of Solids and Lic	quids									

5 Ideal Gases									
6 Thermal Energy and Heat Flow									
7 First Law of Thermodynamics									
8 Applications of First Law of Thermodynamics									
9 Midterm exam + General Review									
10 Second Law of Thermodynamics									
11 Carnot Cycle									
12 Heat Machines									
13 Entropy									
14 Third Law of Thermodynamics									
22 Textbooks, References and/or Other Materials: 1. Physics for Scientists and Engine SERWAY, Robert J. Beichner.	1. Physics for Scientists and Engineers, Raymond A. SERWAY, Robert J. Beichner.								
2. Physics for Scientists and Engine FISBANE, Stephen GASIOROWICZ THORNTON.	2. Physics for Scientists and Engineers, Paul M. FISBANE, Stephen GASIOROWICZ, Stephen T. THORNTON.								
3. Sears and Zemansky's University YOUNG, Roger A. FREEDMAN.	3. Sears and Zemansky's University Physics, Hugh D. YOUNG, Roger A. FREEDMAN.								
23 Assesment									
TERM LEARNING ACTIVITIES NUMBE REIGHT									
Activites Duration (hour)	Total Work Load (hour)							
Theoretical 3.00	3.00 42.00								
Practicals/Labs 0 0.00	0.00								
Self study and preparation Learning Activities to 4000 3.00	3.00								
Homeworks 10 3.00		30.00							
Coningestion of Final Exam to Success Grade 6000 0.00		0.00							
Field Studies 0 0.00		0.00							
Midtern exams		2.00							
Measurement and Evaluation Techniques Used in the Classic exam		2.00							
Measurement and Evaluation Techniques Used in the Classic exam 2.00 Others 13 3.00		2.00 39.00							
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Measurement and Evaluation Techniques Used in the Classic exam 2.00 Others 13 3.00 Fi24 E ECTS / WORK LOAD TABLE 1 2.00 Total Work Load		2.00 39.00 2.00 151.00							
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ÖK5	4	3	3	0	0	3	0	0	4	0	0	0	0	0	0	0
ÖK6	4	4	4	0	0	3	0	0	4	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib ution Level:	Contrib 1 very low ution Level:		2 low		3 Medium			4 High			5 Very High					