

# THERMODYNAMICS

1	Course Title:	THERMODYNAMICS
2	Course Code:	MKNS215
3	Type of Course:	Optional
4	Level of Course:	Short 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):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Öğr.Gör. Oğuzhan Çankaya
15	Course Lecturers:	
16	Contact information of the Course Coordinator:	e-posta: oguzhanc@uludag.edu.tr oda tel: 0 224 294 23 38
17	Website:	
18	Objective of the Course:	The aim of this course is to gain students competencies applying thermodynamics laws to open and closed systems.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	
	1	Applies the basic equation, units and calculation methods used in the analysis of thermodynamics.
	2	Explains the location and the basic concepts of thermodynamics as a science, described the systems and their basic properties.
	3	Uses the reference tables in thermodynamic applications.
	4	Solves the problem related to work and heat.
	5	Analyses the laws of thermodynamics.
	6	Explains changes in states and the principles of overall conversion
	7	Analyses the ideal weather cycles (otto, diesel, hybrid loop).
	8	Calculates efficiency, power and work in internal combustion engines.
	9	Explains the classification and the physical and chemical properties of fuels.
	10	Explains combustion engines and engine knocking.
21	Course Content:	
	<b>Course Content:</b>	
Week	Theoretical	Practice
1	Thermodynamic concepts and definitions, Zeroth law of thermodynamics.	
2	Heat and work concepts and applications.	



ÖK3	5	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
ÖK4	0	4	4	0	0	0	0	4	0	5	0	0	0	0	0	0
ÖK5	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0
ÖK6	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
ÖK7	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
ÖK8	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0
ÖK9	0	0	0	0	4	0	0	0	3	0	0	0	0	0	0	0
ÖK10	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
LO: Learning Objectives    PQ: Program Qualifications																
Contribution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			