

SENSORS AND TRANSDUCERS

1	Course Title:	SENSORS AND TRANSDUCERS	
2	Course Code:	EMEZ002	
3	Type of Course:	Optional	
4	Level of Course:	Short Cycle	
5	Year of Study:	1	
6	Semester:	2	
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:	YOK	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Öğr.Gör. ÖMER NURİ ÇAM	
15	Course Lecturers:	ÖĞR. GÖR. ÖMER NURİ ÇAM	
16	Contact information of the Course Coordinator:	onc@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	The student, every kind of sensor, use the relevant circuits, gain knowledge and skills.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Data Acquisition
		2	Sensor Characteristics
		3	Physical Principles of Sensing
		4	Interface Electronic Circuits
		5	Motion,Occupancy, position and displacement sensors
		6	Velocity,acceleration, force,strain sensors
		7	Pressure, flow sensors
		8	Humidity, acustic, light sensors
		9	Temperature, radiation sensors
		10	Sensor materials and technologies
21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Data acquisition		
2	Physical Stimulus		
3	Sensor Characteristics		
4	physical prinsibles of sensing		
5	sensors electronic interfaces		
6	motion, occupancy sensors		
7	displacement, level, position sensors		

8	velocity, acceleration sensors	
9	force, pressure, , strain etc sensors	
10	flow sensors	
11	acoustic sensors	
12	light detectors	
13	temperature, humidity, moisture sensors	
14	chemical sensors.	

22	Textbooks, References and/or Other Materials:	Handbook of Modern Sensors book.
-----------	---	----------------------------------

23	Assesment	
-----------	-----------	--

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	30.00
Quiz	0	0.00
Home work-project	1	10.00
Final Exam	1	60.00
Total	3	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00

Activites	Number	Duration (hour)	Total Work Load (hour)
-----------	--------	-----------------	------------------------

24. ECTS / WORK LOAD TABLE			
Theoretical	14	2.00	28.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	2.00	28.00
Homeworks	1	16.00	16.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	16.00	16.00
Others	0	0.00	0.00
Final Exams	1	16.00	16.00
Total Work Load			148.00
Total work load/ 30 hr			4.40
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	1	1	1	2	2	4	4	4	3	2	4	0	0	0	0	0
ÖK2	1	1	1	2	2	4	4	4	3	2	4	0	0	0	0	0
ÖK3	1	1	1	2	2	4	4	4	3	2	4	0	0	0	0	0
ÖK4	1	1	1	2	2	4	4	4	3	2	4	0	0	0	0	0

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