

MEASUREMENT TECHNIQUE

1	Course Title:	MEASUREMENT TECHNIQUE	
2	Course Code:	ELEZ101	
3	Type of Course:	Compulsory	
4	Level of Course:	Short Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	6.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	2	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Öğr.Gör. MEHMET ŞEN	
15	Course Lecturers:	Yrd. Doç. Dr. Barış ERKUŞ	
16	Contact information of the Course Coordinator:	mehmetsen@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	Learn and define importance of measurement in applications, know electrical and electronic quantities	
19	Contribution of the Course to Professional Development:	Planning, development and implementation steps in the field of profession to be able to execute together with the security rules.	
20	Learning Outcomes:		
		1	Know measurement faults and analyse statistically.
		2	Define fundamental principals and features of measurement tools
		3	Design basic measurement tools
		4	Choose correct measurement tools
		5	Use more than one measurement tools in the same circuit
		6	
		7	
		8	
		9	
		10	
21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Measurement, measurement units, fundamental electrical quantities		
2	Measurement faults and its classification		
3	Learn electrical quantities, working principals and structures of tools, dc measurement tools, measurements by galvanometer		

4	Features and structures of electrodynamic measurement tools, correctness and resolutions of measurement tools.	
5	Voltage and current measurement in DC.	
6	Measurement of different quantities in AC.	
7	Voltage and current transformers and their use.	
8	Structure of electrodynamic measurement tools and Wattmeters	
9	Electrical power and power factor, and their measurements of in single phase AC.	
10	Power measurements in balanced and unbalanced(aron) 3 phase loads.	
11	Energy measurement, active and reactive energy measurement tools, their structures and working principals.	
12	Use and structures of oschilloscopes and diffrent applications.	
13	Industrial measurements, sensors and transducers, different applications	
14	Lab application exam and assestment of reports.	
22	Textbooks, References and/or Other Materials:	1.)Prof. Dr. Abdi DALFES, Elektrik Ölçme Laboratuvarı Deneyleri 2.) Doç. Dr. H.Pastacı, "Elektrik ve Elektronik Ölçmeleri", Yıldız Üni., 1992 3.)Hasan ÖNAL, Elektronik ve Ölçme Dersleri 4.)Kadir ANASIZ, Elektrik Ölçü Aletleri ve Elektriksel Ölçmeler 5.)Saip DEVELİ, Elektriksel Ölçme Aletleri ve Elektriksel Ölçmeler 6.) Hasan ÖNAL, Ölçme Tekniği 7. Nacar, Mahmut; Elektrik-Elektronik Ölçmeleri ve İş Güvenliği, İskenderun 8.)Metin BEREKET, Engin TEKİN; Elektrik Elektronik ve Ölçme1-2
23	Assesment	
TERM LEARNING ACTIVITIES		NUMBE R
Midterm Exam		1
Quiz		0
Home work-project		0
Final Exam		1
Total		2
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		Measurement and evaluation is carried out according to the principles of Bursa uludag University Associate and Undergraduate Education Regulation.
24	ECTS / WORK LOAD TABLE	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	0	0.00	0.00
Homeworks	14	4.00	56.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	34.00	34.00
Others	0	0.00	0.00
Final Exams	1	34.00	34.00
Total Work Load			180.00
Total work load/ 30 hr			6.00
ECTS Credit of the Course			6.00

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	4	3	3	0	3	3	3	3	4	3	3	4	0	0	0	0
ÖK2	3	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
ÖK3	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	4	5	0	0	0	0	0	4	0	0	0	0	0	0	0	0
ÖK5	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			