CONTROL SYSTEMS

1	Course Title:	CONTROL SYSTEMS	
2	Course Code:	MKRZ203	
3	Type of Course:	Compulsory	
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:		
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Öğr.Gör. ÖMER NURİ ÇAM	
15	Course Lecturers:	Meslek Yüksekokulları Yönetim Kurullarının görevlendirdiği öğretim elemanları.	
16	Contact information of the Course Coordinator:	onc@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	Teach the operation of automatic control systems in the technological field, which provides an understanding of the functions of automatic control systems to gain knowledge and skills, to teach the control systems and transfer functions of these systems, industrial inspection bodies to introduce	
19	Contribution of the Course to Professional Development:	Learning the use of automatic control systems and their application to systems.	
20	Learning Outcomes:		
		1	Automatic Control of the basic concepts and definitions related to the system dynamics and automatic control subjects used in the analysis of mathematical properties of the Laplace transform
		2	Automatic control systems, defining the characteristics of input-output transfer functions and block diagrams to make enough practice on these issues and the adequacy of removal of
		3	Shows the input face of a certain temporary and permanent systems achieve the required behavior and the situation in this regard concepts
		4	Automatic control systems that constitute the brain control the structure of organs, the basic control (PID), and their working styles and forms of application possibilities of industrial control systems
		5	Stability control systems;

	6	Measuring organ, organ of control of the system and control concepts
	7	Modern and contemporary issues and gain the ability to learn.
	8	
	9	
	10	

21	Course Content:

Course Content:

Week	Theoretical	Practice
1	Classification of linear control systems	
2	element, comprising a control system	
3	Some important linear control systems	
4	Basic open control systems	
5	basic feedback control systems	
6	transfer functions	
7	mid exam	
8	Reducing and analyzing Transfer Functions using Block diagrams	
9	Derivative Control	
10	Application of PID	
11		
12		
13		
14		
15		
16		

Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical		14	2.00	28.00
Practicals/Labs		0	0.00	0.00
Self study and preperation		14	2.00	28.00
Homeworks		0	0.00	0.00
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				88.00
Total work load/ 30 hr				2.93
ECTS Credit of the Course				3.00

22	Textbooks, References and/or Other	• Yüksel İ, Automatic Control, System Dynamics and Analysis, and Control Dynamic Systems, • Özdaş N, Dinibütün T, AUTHORS A, Foundations of Automatic Control, Birsen Publishing House, Istanbul • Benjamin C. KUO Translated by: Prof. Dr.Atilla BIR, Automatic Control Systems. • R.T. Stefani, B. Shahian, C.J.Savant, G. H. Hostetter, Press, 2002 • Automatic Control Systems I", M Kemal Sarıoğlu, 1999, Birsen Yayınevi
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	60.00
Total	2	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
Measurement and Evaluation Techniques Used in the Course	Measurement and evaluation is carried out according to the priciples of Bursa uludag University Associate and Undergraduate Education Regulation.

24 ECTS / WORK LOAD TABLE

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	4	4	4	1	2	2	4	0	0	0	0	0
ÖK2	1	1	1	2	4	4	4	1	2	2	4	0	0	0	0	0
ÖK3	1	1	1	2	4	4	4	1	2	2	4	0	0	0	0	0
ÖK4	1	1	1	2	4	4	4	2	2	2	4	0	0	0	0	0
ÖK5	1	1	1	2	4	4	4	2	2	2	4	0	0	0	0	0
ÖK6	2	1	2	2	3	4	4	2	1	2	3	0	0	0	0	0
ÖK7	4	4	4	4	4	4	4	4	4	4	4	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**