POWER TRAIN AND MOTION CONTROL SYSTEMS

1	Course Title:	POWER TRAIN AND MOTION CONTROL SYSTEMS	
2	Course Code:	EHAZ201	
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):	2	
11	Prerequisites:	none	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Öğr. Gör. CAFER KAPLAN	
15	Course Lecturers:	Meslek Yüksekokulları Yönetim Kurullarının görevlendirdiği öğretim elemanları.	
16	Contact information of the Course Coordinator:	Öğr. Gör Cafer KAPLAN Bursa Uludağ Üniversitesi Teknik Bilimler MYO Hibrid ve Elektrikli Taşıtlar Prog. Görükle / Bursa	
17	Website:		
18	Objective of the Course:	In this course, students get to know the powertrain. Thanks to the academic and theoretical knowledge, they can learn the functions of the parts and sensors used in the powertrain and easily perform their maintenance and repairs.	
19	Contribution of the Course to Professional Development:	Students who successfully complete this course; • Recognize power transmission organs. • Learn the concepts and working principles. • They know hydraulic systems. • Learn about mechanical and electronic gearboxes. • Recognize pulley, belt and chain system. • Solve simple problems by having knowledge about shafts.	
20	Learning Outcomes:		
		1	Recognize power transmission organs.
		2	Learn the concepts and working principles.
		3	They know hydraulic systems.
		4	Learn about mechanical and electronic gearboxes.
		5	Recognize pulley, belt and chain system.
		6	Solve simple problems by having knowledge about shafts.
		7	
		8	
		9	
		10	
21	Course Content:		
	Course Content:		
Week	Theoretical		Practice

1	Powertrain identification	Power transmission of hybrid and electric vehicles
2	Clutches, principles of operation	Hybrid and electric vehicle clutches
3	Hydraulic clutch centers	Clutch systems in hybrid and electric vehicles
4	Front wheel drive gearboxes	Hybrid and electric vehicles Front-wheel drive gearboxes
5	Series, parallel, mixed power transmission systems	Series, parallel, mixed power transmission systems
6	Series, parallel, mixed power transmission systems	Series, parallel, mixed power transmission systems
7	Series, parallel, mixed power transmission systems	Series, parallel, mixed power transmission systems
8	Midterm Exam	
9	Powertrain systems of hybrid and electric vehicles	Powertrain systems of hybrid and electric vehicles
10	Automatic Gearbox Hydraulic System	test and control applications
11	Variable Geometry Gearbox (CVT)	test and control applications
14	Axles	test and control applications
22	Maintenance	Tom Denton
23	Assesment	Practical Perspectives

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Mid Exams	1	40
Final Exam	1	60
Total work load / 30 hr	0	0.00
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.

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	1	20.00	20.00
Homeworks	1	12.00	12.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	1.00	1.00
Others	0	0.00	0.00
Midterm Exam	1	1.00	1.00
Total Work Load			90.00
Total work load / 30 hr	0	0.00	3.00
ECTS Credit of the Course			3.00

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	3	2	2	4	5	2	3	4	3	0	0	0	0	0	0	0
ÖK2	3	3	4	4	3	4	4	3	3	0	0	0	0	0	0	0
ÖK3	2	3	3	3	4	4	5	3	2	0	0	0	0	0	0	0
ÖK4	2	2	3	3	4	2	3	3	3	0	0	0	0	0	0	0
ÖK5	3	3	2	4	3	3	4	4	4	0	0	0	0	0	0	0
ÖK6	3	3	4	3	3	4	3	4	3	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
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	**1 very low**		**2 low**			**3 Medium**			**4 High**			**5 Very High**				