AUTOMOTIVE TRANSMISSION DESIGN

1	Course Title:	AUTOMOTIVE TRANSMISSION DESIGN
2	Course Code:	OTO 5005
3	Type of Course:	Compulsory
4	Level of Course:	Second Cycle
5	Year of Study:	1
6	Semester:	1
7	ECTS Credits Allocated:	7.50
8	Theoretical (hour/week):	3.00
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:	Yrd.Doç.Dr. EROL SOLMAZ
15	Course Lecturers:	Yrd.Doç.Dr. Erol Solmaz Özgür Hügül (TOFAŞ) Torino Politeknik Üniersitesinden öğretim elemanları
16	Contact information of the Course Coordinator:	Yrd.Doç.Dr. Erol Solmaz e-posta :esolmaz@uludag.edu.tr Tel : 0 224 2941985 Adres: U.Ü.Müh.Mim.Fak.Otomotiv Mühendisliği Bölümü 16059 Görükle Kampüs/ BURSA
17	Website:	
18	Objective of the Course:	The goal of course is to learn all the elements that the first movement from the motor until wheels one of the objectives of the course is to be known as Automotive Transmission systems.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	

	1	Learning the components of the working principles of the vehicle
	2	To improve the ability to design different gear boxes
	3	Determination of the mechanical and hydraulic clutches awareness
	4	Differential gain the ability to design
	5	
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21	Course Content:	
	Course Content:	
Week	Theoretical	Practice
1	Mechanical efficiency, Automobile gearboxes schemes	

2	Gears	
3	Transmission ratios determination, practical examples of automobile and industrial gearboxes	
4	Forces that affect the vehicle	
5	Stage gearboxes	
6	Friction clutch	
7	Hydrodynamic clutch, hydrodynamic torque converter	
8	Differentials	
9	Influence of differentials on vehicle behaviour	
10	Axle systems	
11	Automatic gearboxes	
12	Automatic gearboxes control strategies	
13	Design of vehicle gearboxes	
14	Automobile design testing	

22	Textbooks, References and/or Other Materials:	G.Lechner, H. Naunheimer, Automotive Transmissions, Fundamentals, Selection,Design and Application, 1999, Springer. Prof.Dr.Nusret Sefa Kuralay, Motorlu Taşıtlar Cilt 1, 2008, MMO

Activites			Number	Duration (hour)	Total Work Load (hour)
Theoretical			14	3.00	42.00
Midterm Exam	0	0.00			
Practicals/Labs			0	0.00	0.00
Self study and preperation			14	3.00	42.00
Homework-project	1	40.00			
Homeworks			1	20.00	20.00
Projects			1	90.00	90.00
Total	2	100.00			
Field Studies			0	0.00	0.00
Success Grade			0	0.00	0.00
Midterm exams					
Others			0	0.00	0.00
Final Exams			1	30.00	30.00
Total		100.00			
Total Work Load					224.00
Course					
Total work load/ 30 hr					7.47
ECTS Credit of the Course					7.50

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	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
ÖK2	4	0	0	0	0	4	0	0	0	4	0	0	0	0	0	3
ÖK3	4	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
ÖK4	4	0	0	0	0	4	0	0	0	4	0	0	0	0	0	3

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	1 very low	2 low	3 Medium	4 High	5 Very High