POWER TRANSMISSION UNITS

1	Course Title:	POWER TRANSMISSION UNITS
2	Course Code:	OTO3005
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	4
6	Semester:	8
7	ECTS Credits Allocated:	4.00
8	Theoretical (hour/week):	3.00
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:	Doç. Dr. FATİH KARPAT
15	Course Lecturers:	yok
16	Contact information of the Course Coordinator:	Prof. Dr. Emin Güllü Tel: 2941959 mail: egullu@uludag.edu.tr
17	Website:	
18	Objective of the Course:	Power transmission elements can be made recognizable and accounts. In particular the reduction of the mass moments of inertia be done, the engine side of the reduced availability of inertia, moment of inertia of the tires account can be made by the method of shaking, developing new information systems and technology transfer, account can be made automatic gearbox and automatic clutch.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	

	1	Understood the concepts of moment of inertia will be a practical sense.
	2	Calculation of moments of inertia of the machine parts that do not have proper geometry
	3	Application of the methods applied to parts which are very difficult to account.
	4	Automatic operation and calculation of power transmission systems.
	5	Velocity analysis and solution clutches.
	6	Built-in systems analysis and solution speed clutch spring.
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21	Course Content:	

Course Content:	

Week	Theoretical	Practice

#	Topic			
1	Engine to wheels, clutch, gearbox, shaft or side shaft and construction of power transmission using differential. Function of engine speed and torque in the torque of the drive force curves characterized by the source derivation			
2	System that connects the two shafts running at different speeds and at any time or any time that separates the two types of grip and shaft system that brings the same speed. Recognized as the expected properties of materials used in clutches and friction materials.			
3	Properties of the friction clutches, friction clutches occurrence of axial force, the contact surfaces under the influence of the force P of the pressure and consequently the friction moment of the calculation. Mechanical Clutches Control Assembly			
4	The dynamic behavior of friction clutches			
5	Gearbox, fixed gear, Direct shaft, the shaft, splines.			
6	Selection of gears, gears Gear Ratio Selection			
7	Mass moment of time accounts for the calculation of the clutch A-Mass moment of inertia calculation .B-Reduced mass moment of inertia, such as full disk			

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	6	5.00	30.00
Homeworks	0	0.00	0.00
Projects	2	30.00	60.00
Field Studies	0	0.00	0.00
Midterm Exams	1	1.00	1.00
Others	3	3.00	9.00
Final Exams	1	1.00	1.00
Total Work Load			143.00
Total workload/30			4.77
ECTS Credit of the Course			4.00

(Overlapping topic rows:)
9	Moment of the discovery of resistance to M2
11	Modeling Engine + Clutch +Load
	Motor Side Mass Moment of Inertia
14	Engine speed, load rate and the rate of joint
	equations with the help of the MATLAB
22	Textbook, References and/or Other Materials	1. Power Transmission Systems Lecture Notes, Prof. Dr.

R.Shaver. S.A.E. Publications, AE-17, 1997, Warrendale, PA, USA |

| 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	

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	4	3	4	0	0	0	5	0	0	0	0	0	0	3	0	0
ÖK2	5	3	3	0	4	0	4	0	0	0	3	0	0	0	0	0
ÖK3	3	2	3	0	0	0	5	0	0	0	0	0	0	0	0	0
ÖK4	3	5	0	0	0	4	0	2	0	0	5	3	0	3	0	0
ÖK5	3	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0
ÖK6	5	5	4	0	5	0	4	3	0	0	4	0	0	4	0	0

LO: Learning Objectives PQ: Program Qualifications					
Contribution Level:	1 very low	2 low	3 Medium	4 High	5 Very High