VEHICLE BRAKING SYSTEMS

1	Course Title:	VEHICLE BRAKING SYSTEMS	
2	Course Code:	OTO6114	
3	Type of Course:	Optional	
4	Level of Course:	Third Cycle	
5	Year of Study:	2	
6	Semester:	4	
7	ECTS Credits Allocated:	6.00	
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:	Prof. Dr. RUKİYE ERTAN	
15	Course Lecturers:	Yok	
16	Contact information of the Course Coordinator:	Prof. Dr. Rukiye Ertan Bursa Uludağ Üniversitesi Otomotiv Müh. Böl. 16059 Görükle/Bursa e-mail: rukiye@uludag.edu.tr tel: 0 224 2940653	
17	Website:	None	
18	Objective of the Course:	It is aimed to provide basic information about brake systems used in vehicles, to teach friction-wear behavior in brakes and friction materials.	
19	Contribution of the Course to Professional Development:	Recognizes brake system components, calculates brake, knows the behavior between brake friction pairs and friction materials.	
20	Learning Outcomes:		
		1	Knows the brake system components.
		2	Can make calculations of brakes.
		3	Knows behavior and materials between brake friction pairs.
		4	Knows the methods used in testing and analysis of vehicle brake systems.
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21	Course Content:		
	Course Content:		

Week	Theoretical	Practice
1	Overview and history of brake systems	
2	Brake system components	
3	Brake system components	
4	Air brake systems	
5	Hydraulic brake systems	
6	Electronically controlled brake systems.	
7	Braking principle, braking and stopping distances	
8	Exam	
9	Braking dynamics and force calculations	
10	Braking dynamics and force calculations	
11	Wear and friction concept	
12	Friction materials	

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	14	5.00	70.00
Homeworks	1	60.00	60.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	2.00	2.00
Others	0	0.00	0.00
Final Exams	1	2.00	2.00
Total Work Load			178.00
Total work load/ 30 hr			5.87
ECTS Credit of the Course			6.00

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Quiz	0	0.00
Final Exam	1	60.00
Total	3	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		Evaluation is made by taking into account the midterm, homework and final exam grades.

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	1	3	3	3	1	4	2	2	3	0	0	0	0	0	0
ÖK2	4	5	5	5	4	3	2	3	4	4	0	0	0	0	0	0
ÖK3	4	3	2	1	2	2	3	3	2	4	0	0	0	0	0	0
ÖK4	4	5	3	5	2	1	3	1	4	4	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**			