

AUTOMOTIVE MATERIALS

1	Course Title:	AUTOMOTIVE MATERIALS	
2	Course Code:	OTO4021	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	4	
6	Semester:	7	
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:	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 e-mail: rukiye@uludag.edu.tr Tel: + 90 (224) 294 06 53 Adres: Uludağ Üniversitesi, Mühendislik Fakültesi, Otomotiv Mühendisliği Bölümü, 16059, Görükle-Bursa, Türkiye.	
17	Website:	None	
18	Objective of the Course:	Giving information about the types of materials and the structure and mechanical properties of these materials used in automotive industry .	
19	Contribution of the Course to Professional Development:	Knows the materials and alternatives used in the design and manufacture of automotive parts and can select the optimum material.	
20	Learning Outcomes:		
		1	Knows the types and properties of materials used in automotive industry.
		2	Can determine which material can be used in which part.
		3	Knows the properties of metal, polymer and composite materials.
		4	Knows the methods of testing and manufacturing of materials and parts used in automotive.
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Automotive materials overview		
2	Material selection in automotive		
3	Iron-based materials		

22	Textbooks, References and/or Other Materials:	1. Prof. Dr. Fehim Fındık, Prof. Dr. Sefer Cem Okumuş, Dr. Öğr. Üyesi Murat Çolak , 'Malzeme Seçimi ve Uygulamaları', Seçkin Yayınevi, 2.baskı, 2016 2. Charles, J.A., Crane, F.A.A. and Furnes, J.A.G. "Selection and Use of Engineering Materials", Reed Educational and Professional Publishing Ltd., 1999. 3. Kalpakjian, Serope "Manufacturing processes for engineering materials" New Jersey : Prentice Hall , 2003. 4. Rowe, Jason "Advanced Materials in Automotive Engineering",Woodhead Publishing in Materials, Elsevier, 2012 5. Davies, Geoffrey "Materials for Automobile Bodies" Butterworth Heinemann, 2012
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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	4	1	2	4	5	3	3	4	1	1	0	0	0	0
ÖK2	3	1	4	1	2	4	5	3	3	4	1	1	0	0	0	0
ÖK3	3	1	4	1	2	4	5	3	3	4	1	1	0	0	0	0
ÖK4	5	1	5	1	2	4	5	3	3	4	1	1	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																

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