	CER	RAMIC	MATERIALS					
1	Course Title:	CERAM	IC MATERIALS					
2	Course Code:	MAK4029						
3	Type of Course:	Optional						
4	Level of Course:	First Cycle						
5	Year of Study:	4						
6	Semester:	7						
7	ECTS Credits Allocated:	3.00						
8	Theoretical (hour/week):	2.00						
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.	AGAH UĞUZ					
15	Course Lecturers:	Yok						
16	Contact information of the Course Coordinator:	uguz@uludag.edu.tr 0224-2941966 Uludağ Üniv. Mühendislik-Mim. Fak. Görükle Bursa						
17	Website:							
18	Objective of the Course:	This course aimed to provide sufficient knowledge to the students about ceramic materials which are very important among the engineering materials and also to introduce their manufacturing methods and						
19	Contribution of the Course to Professional Development:							
20	Learning Outcomes:							
		1	Have knowledge about ceramic materials, their general properties, their application areas and production.					
		2	Can determine basic raw-material properties of ceramics.					
		3	Can decide whether a ceramic material can be used for a certain application or not and what type of ceramic material can be used.					
		4						
		5						
		6						
		7						
		8						
		9						
		10						
21	Course Content:							
		Co	ourse Content:					
Week	Theoretical		Practice					
1	Introduction and the content of the c							
2	Types of materials, material structure crystal structure.	es,						

3	Gene	eral c	charad	cteristi	cs of	cerami	CS.										
4	Appli	catio	on are	as of (	ceram	nics.											
5	Comp adva				ation	of trad	itional	and									
6	Manu	ufact	uring	proce	sses (	of cerai	amics.										
7	Repe	eating	g cou	rses a	nd mi	dterm e	exam										
8	Ceramic refractory materials.																
9	Qualitative classification of ceramic materials.																
10	Ceramic raw materials.																
11	Cerai deter			ateria	l prop	erties a	and th	eir									
12	Repe	eating	g cou	rses a	nd mi	dterm e	exam										
13	Basic	c cer	amic	crysta	l struc	tures.											
14	Silica	ate st	tructu	res.													
22	Textbooks, References and/or Other Materials:					Ma 2-3 3-1 As	<ol> <li>İleri Teknoloji Malzemeleri, A. Emel Geçkinli, İTÜ Matbaası, 1991.</li> <li>Seramik, Yüksel Güner, Gençlik Kitabevi, 1987.</li> <li>Malzeme Bilimi ve Mühendislik Malzemeleri-Cilt 2, D.R. Askeland, Çev. Mehmet Erdoğan, Nobel Yayın Dağıtım, 1998.</li> </ol>										
Activites						Number			Dura	Duration (hour)			Total Work Load (hour)				
Theoretical 2						40,00 14			2.00	2.00			28.00				
Practicals/Labs							0			0.00	0.00			0.00			
Self study and preperation						11				1.00	1.00			7.00			
Homeworks					^  ·	1			12.00			12.00					
Projects 4										0.00			0.00				
Field Studies						(	0			0.00				0.00 14.00			
Midtern Contrib	Aidterm exams					50	2 50 00			7.00	7.00						
Others	thers						5			2.00			10.00 15.00				
Final Ex	inal Exams						100.00			15.00	15.00						
Total Work Load							86.00										
10tal w 24	24 MECTS / WORK LOAD TABLE												2.87				
ECTS (	Credit	of th	ne Co	urse												3.00	
25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS																	
1						PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16
	P	2Q1	PQ2	PQ3	PQ4						l •						
ÖK1	<b>P</b>		<b>PQ2</b> 4	<b>PQ3</b> 3	<b>PQ4</b> 3	2	3	3	2	2	5	4	2	4	3	0	0
ÖK1 ÖK2							3 3	3	2	2 2	•	4	2 2	4 4	3 3	0	0 0
	4	+ +	4	3	3	2			_		5	-					

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