PROPERTIES OF SOLID MATERIALS I(KATIHALFIZ.A.B.D.IÇIN)

1	Course Title:	PROPERTIES OF SOLID MATERIALS I(KATIHALFIZ.A.B.D.IÇIN)
2	Course Code:	FZK6303
3	Type of Course:	Compulsory
4	Level of Course:	Third Cycle
5	Year of Study:	1
6	Semester:	1
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:	
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Doç. Dr. MÜRŞİDE ŞAFAK HACIİSMAİLOĞLU
15	Course Lecturers:	Dr. Öğr. Üyesi M. Cüneyt HACIİSMAİLOĞLU
16	Contact information of the Course Coordinator:	Doç. Dr. Mürşide HACIİSMAİLOĞLU msafak@uludag.edu.tr, (0224) 2941697, Fen Edebiyat Fakültesi, Fizik Bölümü 16059 Görükle Kampüsü Bursa
17	Website:	
18	Objective of the Course:	To study structural,dynamic, mehchanical, electrical, optical and magnetic properties of solids
19	Contribution of the Course to Professional Development:	Learning production, designing of materials used common in Daily-life and investigate their properties. İmproving production and designing the materials with the desired properties.
20	Learning Outcomes:	

		1	Learning classificaiton of solids according to the physical properties
		2	Learning structural properties and calculations them
		3	Learning mechanical properties and relations between mechanical and structural properties.
		4	Learning thermal properties and their calculations.
		5	Learning electrical and magnetic properties and their calculations
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21	Course Content:	

Course Content:

Week	Theoretical	Practice
1	Classifacation of solids according their properties.	
2	Structural properties	
3	Determination and calculation of structural properties.	

4	Dynamical and mechanical properties.	
5	Vibrational motions in solids, classically and quantum	
6	Relations between structural and mechanical properties.	
7	Thermal properties.	
8	Thermal capacity models, capacity calculations	
9	Electrical properties	
10	Parameters affecting electrical properties	
11	Classical and quantum calculation of electrical properties.	
12	Magnetic properties, magnetic materials and applicaitons	
13	Relations between electrical and magnetic properties	
14	Applications of solids according to use-area.	

22	Textbooks, References and/or Other Materials:	1. Ders Notları 2. J. M. Zımans, Principles of Theory of Solids, Cambridge University Pres, Cambridge U.K. (1972). 3. J. Crangle, The Magnetic Properties of Solids, Edward Arnold Publisher Limited, London (1977).

23	Assesment

Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical Quiz	0	0.00 14	3.00	42.00
Practicals/Labs		0	0.00	0.00
Final Exam Self study and preperation	1	70.00 14	6.00	84.00
Homeworks		10	5.00	50.00
Contribution of Term (Year) Learning Activities to Success Grade Projects		30.00 0	0.00	0.00
Field Studies		0	0.00	0.00
Contribution of Final Exam to Success Grade Midterm exams		70.00 0	0.00	0.00
Others		0	0.00	0.00
Measurement and Evaluation Techniques Used in the Final Exam	The system of relative evaluation is applied.	1	2.00	2.00
Total Work Load				178.00
24 ECTS / WORK LOAD TABLE Total work load/ 30 hr				5.93
ECTS Credit of the Course				6.00

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

ÖK5	3	4	5	0	0	4	0	0	0	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib ution Level:	**1 very low**			**2 low**			**3 Medium**			**4 High**				**5 Very High**		