MACHINE MATERIALS

1	Course Title:	MACHINE MATERIALS
2	Course Code:	BSM3821-S
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	3
6	Semester:	5
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:	-
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Doç.Dr. NAZMİ İZLİ
15	Course Lecturers:	-
16	Contact information of the Course Coordinator:	e-posta :nizli@uludag.edu.tr Telefon: 0 224 2941604 Adres: Uludağ Üniversitesi, Ziraat Fakültesi, Biyosistem Mühendisliği Bölümü, Görükle Kampüsü, 16059,
17	Website:	
18	Objective of the Course:	Outcome way of choose abilities to more proper material according to technical specification of materials in machine and structure constructions also with respect to determination of technical specifications of metallic material which will used in machine frame and components and developing of a new material
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	
	1	Students can be recognise of any material and can be say to places which is used according to base science
	2	Students can be determine of technical specifications of a material investigating as a mathematical or experimental
	3	Students can be decide to proper by making a strength analysis for plastic and metallic materials using often in industr.
	4	Students can be able to know to methods of ensuring of basic materials using often in industry and its can be able to apply for another materials
	5	Students can be know to alloy methods and heat processes of metallic materials and they can be apply to the methods and processes for a new specific material
	6	Students can be know to protection methods of metallic material at the opposite of outside effects and can be apply to the methods properly
	7	A proper material using in manufacture by analysis can be choosing
	8	Applying to method of a material choosing to basic informations of engineering which was taken from other courses

	9	Having of an ability in analysis of a material and to create a new material
	10	Following a new material which was developed as international and developing a new material according to domestic conditions

21	Course Content:

Course Content:

Week	Theoretical	Practice
1	General classification of materials,explanation of places using as with a special objective Demonstration of steel materials using often in Industry	
2	Explanation of mechanic and physical specifications of materials and analyzing by mathematical equations Solution some problems related to mechanic and physical specifications of materials	
3	İnformation on determination of methods of mechanic and physical specifications related to some methallic materials as experimental Explanation on draw experiment of steel material	
4	Explanation on shaping specifications of steel materials using in machine constructions Demonstration on bent and bow experiment in Sheet metals	
5	Making some solutions on strength problems of metallic materials	
6	Explanation on cyristal systems of interior specifications of interior structer of metallic and plastic materials	
7	Explanation on ensuring methods of some structer of metallic materials	
8	Explanation on ensuring method of iron with high carbon Instruction on alloys of metallic materials and explanation on alloy kinds	
9	Repeating courses and midterm exam	
10	Instructions on miscellaneous steels using often in industry and showing way of steels briefly in standards Some examples related to showing of steels brieflyi	
11	Instructions on miscellaneous plastics and its classifications according to some specifications Instructions on ensuring methods for plastics	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	2.00	28.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	15.00	15.00
Others	0	0.00	0.00
Final Exams	1	25.00	25.00
Total Work Load			96.00
Total work load/ 30 hr			3.20
ECTS Credit of the Course			3.00

12	Heat processes of metallic materials and protecting methods from corrosion of metallic materials Protecting ways of metallic materials from atmospherical effects	
13	Ensure of metallic materials by cinderation method Explanation on cinderation method	
14	Explanation of specifications of physical and interior structer of materials as out of metal as ceramic,wood Explanation of areas using in industry as an out of metal	

22	Textbooks, References and/or Other Materials:	1-ZEYTİNOĞLU M. 2003. Science of Material Course Notes of Agriculture Faculty of U.Ü. No:96 (128p.) 2-BAYDUR,G.,1979. Serial:32 Books of Government of Material 3-PATTON,W.J., 1975.Materials in Industry.Department of mechanical technology,Red RiverCommunity, New Jersey. 4-ONARAN,K., 1996.Problems of Material Science and solutions Science,Technic publish house İstanbul ,167 p. 5-ZEREN,Y.,1988. Material Science of Machine,Agricultural Mechanization Dept.of Agriculture Faculty of Ç.Ü. Adana,188p.
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	3	3	4	3	4	3	4	5	4	3	4	4	0	0	0	0
ÖK2	3	3	3	5	4	3	4	4	5	4	3	3	0	0	0	0
ÖK3	4	3	4	3	5	3	3	5	4	4	3	5	0	0	0	0
ÖK4	4	4	4	3	5	4	2	4	5	5	5	4	0	0	0	0
ÖK5	4	4	4	2	5	3	4	4	3	3	4	4	0	0	0	0
ÖK6	3	5	3	3	4	3	3	4	3	4	2	4	0	0	0	0

ÖK7	4	4	4	3	5	2	3	5	3	3	4	4	0	0	0	0
ÖK8	5	4	4	2	4	3	3	5	2	3	4	4	0	0	0	0
ÖK9	4	5	5	4	5	4	4	4	4	4	5	5	0	0	0	0
ÖK10	3	4	4	4	4	3	3	4	3	3	3	4	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

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