	MECHANICS OF MATERIALS I											
1	Course Title:	МЕСНА	NICS OF MATERIALS I									
2	Course Code:	INS2011										
3	Type of Course:	Compuls	sory									
4	Level of Course:	First Cyc	cle									
5	Year of Study:	2										
6	Semester:	3										
7	ECTS Credits Allocated:	5.00										
8	Theoretical (hour/week):	3.00										
9	Practice (hour/week):	1.00										
10	Laboratory (hour/week):	0										
11	Prerequisites:											
12	Language:	Turkish										
13	Mode of Delivery:	Face to	face									
14	Course Coordinator:	Doç. Dr.	M.ÖZGÜR YAYLI									
15	Course Lecturers:	Prof. Dr.	BABÜR DELİKTAŞ									
16	Contact information of the Course Coordinator:	ozguryayli@uludag.edu.tr 224 2941961 Uludağ Univ. Müh. Fak. İnşaat Müh. Böl. Görükle, Bursa										
17	Website:											
18	Objective of the Course:											
19	Contribution of the Course to Professional Development:											
20	Learning Outcomes:											
		1	Be able to describe the definitions, fundamental terms, historical development and application fields of the theory of strength of materials, both orally and in writing									
		2	Be able to describe and exemplify the relations between force-stress, stress-strain, and force-displacement of the deformable bodies relating to real world									
		3	Be able to model the relations between force-stress, stress-strain, and force-displacement of the deformable bodies by using simple drawing techniques or modern computer technology									
		4	Be able to establish theoretical formulation for the relations between force-stress, stress-strain, and force-displacement of the deformable bodies by using mathematic and the theory of strength of materials									
		5	Be able to describe mechanical properties of materials and able to identify these mechanical properties experimentally									
		Be able to calculate load carrying capacity of the structural members and be able control the mechanical behavior of the structural members										
		7										
		8										
		9										
		10										
21	Course Content:											
		Co	ourse Content:									

Week	Theoretical		Practice							
1	Introduction									
2	Concept of stress and stress tensor		Solving application problems							
3	Stress analysis of axially loaded bar	s	Solving application problems							
4	Stress analysis of axially loaded bar	s	Solving application problems							
5	Strain and deformation in axially load determinate system	ded bars,	Solving application problems							
6	Strain and deformation in axially loaindeterminate systems	ded bars,	Solving application problems							
7	Concept of strain and strain tensor		Solving application problems							
8	Relationship between stress and str	ain	Solving application	n problems						
9	Elastic strain Energy		Solving application	n problems						
10	Mechanical properties of materials		Tension test							
11	Mechanical properties of materials a theories of failure	ind	Compression test	1						
12	Area of moment of inertia		Solving application	n problems						
13	Torsion of circular elastic bars		Solving application problems							
14	Torsion of noncircular members		Torsion test							
22 Activit	Textbooks, References and/or Othe Materials:	r	Cisimlerin Mukavemeti, İnan, M., İTÜ Vakfı,2001 Cisimlerin Mukavemeti, Mehmet Bakioğklu, Birsen Yayınevi, 2006 Engineering Mechanics of Solids.E.P Popov.Prentice Hall. Number Duration (hour) Total Work							
Th	l:I		070077004400	D	Load (hour)					
Theore				Beer, F3,020nd Johnston						
	als/Labs		14	1.00	14.00					
TERMI	dy and preperation EARNING ACTIVITIES	NUMBE		5.00	70.00					
Homew		1	35 ₀ 00	20.00	20.00					
_	g Exam	'		0.00	0.00					
Field S	tudies workapn s ject	1	0 5 0 0	0.00	0.00					
Others		<u> </u>	0	3.00	0.00					
Fintal E		3	100.00	0.00	3.00					
	vork Load]3	100.00	3.00	155.00					
	ss Grade ork load/ 30 hr				5.07					
	Credit of the Course		-		5.00					
Total	Great of the Oodise		100.00		3.00					
	rement and Evaluation Techniques U	sed in the								
24	ECTS / WORK LOAD TABLE									
25	CONTRIBUTION	OF LEA	RNING OUTCO	OMES TO PROGRA	AMME					

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16
ÖK1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Contrib 1 very low ution Level:			2	2 low		3	Medi	um	4 High			5 Very High				
	LO: Learning Objectives PQ: Program Qualifications															
ÖK6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0