

COURSE: ELASTICITY		
DEGREE: MECHANICAL ENGINEERING	YEAR: 3rd	TERM: 1st

WEEKLY PLANNING								
WEEK	SESSION	DESCRIPTION	TEACHING (mark X)		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	WEEKLY PROGRAMMING FOR STUDENT		
			L E C T U R E S	S E M I N A R S		DESCRIPTION	CLASS HOURS (1,66=50+50 min)	HOMEWORK HOURS (Max. Estim. 6,5h)
1	1	CHAPTER 1: FUNDAMENTALS Subject 1: Equilibrium in deformable bodies	X			Previous Reading of proposed themes. Personal work about lesson	1,66	6,5
	2	Resolution of exercises related to Session 1		X		Personal work about Session 1 Propossed exercisses. Discussion	1,66	
2	3	Subject 1: Equilibrium in deformable bodies	X			Previous Reading of proposed themes. Personal work about lesson	1,66	6,5
	4	Resolution of exercises related to Session 1 and 3		X		Personal work about Session 1 and 3 Propossed exercisses. Discussion	1,66	
	5	Subject 2: Kinematic of deformable bodies	X			Previous Reading of proposed themes. Personal work about lesson	1,66	

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3	6	Resolution of exercises related to Session 1, 3 and 5		X		Personal work about Session 1, 3 and 5 Proposed exercises. Discussion	1,66	6,5
	7	Subject 3: Behaviour laws	X			Previous Reading of proposed themes. Personal work about lesson	1,66	6,5
4	8	Resolution of exercises related to Session 5 and 7		X		Personal work about Session 7 Proposed exercises. Discussion	1,66	
	5	9	CHAPTER 2: Formulation of elasticity Subject 4: Differential formulation	X			Previous Reading of proposed themes. Personal work about lesson	1,66
10		Resolution of exercises related to Session 7		X		Personal work about Session 7 Proposed exercises. Discussion	1,66	
6	11	Subject 5: Integral formulation	X			Previous Reading of proposed themes. Personal work about lesson	1,66	6,5
	12	Resolution of exercises related to Session 9 and 11		X		Personal work about Session 9 and 11 Proposed exercises. Discussion	1,66	
7	13	CHAPTER 3: PLASTICITY CRITERIA Subject 6: Plasticity criteria	X			Personal work about Session 9 and 11 Proposed exercises. Discussion	1,66	6,5

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	14	Resolution of exercises related to Session 13		X		Personal work about Session 13 Proposed exercises. Discussion	1,66	6,5
8	15	CHAPTER 4. METHOD OF RESOLUTION OF THE ELASTICITY EQUATIONS Subject 7. Finite Element Method	X			Previous Reading of proposed themes. Personal work about lesson	1,66	6,5
	16	Lab session. Introduction to the FEM and the problem to solve by a commercial software.			X	Work in groups related to the session 16. Prepare a Report.	1,66	
9	17	Subject 7. Finite Element Method (II)	X			Previous Reading of proposed themes. Personal work about lesson	1,66	6,5
	18	Resolution of exercises related to Session 15 and 17		X		Personal work about Session 15 and 17 Proposed exercises. Discussion	1,66	
10	19	Lab session. Applying the knowledge of the theoretical concepts as well as the practical knowledge acquired , the students will study the stresses and strains in elements of simple geometry			X	Work in groups related to the Lab session 19. Prepare a Report.	1,66	6,5
	20	Lab session. Applying the knowledge of the theoretical concepts as well as the practical knowledge acquired , the students will study the stresses and strains in elements of simple geometry			X	Work in groups related to the Lab session 20. Prepare a Report.	1,66	
	21	CHAPTER 5. BIDIMENSIONAL ELASTICITY Subject 8: Bidimensional elasticity	X			Previous Reading of proposed themes. Personal work about lesson	1,66	

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11	22	Lab session. Applying the knowledge of the theoretical concepts as well as the practical knowledge acquired , the students will propose the design of a simple structural element not to overcome the elastic regime.			X	Work in groups related to the Lab session 22. Prepare a Report.	1,66	6,5
12	23	Subject 8: Bidimensional elasticity (II)	X			Previous Reading of proposed themes. Personal work about lesson	1,66	6,5
	24	Resolution of exercises related to Session 21 and 23		X		Personal work about Session 21 and 23 Proposed exercises. Discussion	1,66	
13	25	Subject 9: Bidimensional elasticity (polar coordinates)	X			Previous Reading of proposed themes. Personal work about lesson	1,66	6,5
	26	Resolution of exercises related to Session 21, 23 and 25		X		Personal work about Session 21, 23 and 25 Proposed exercises. Discussion	1,66	
14	27	CHAPTER 6. ADVANCED CONCEPTS Subject 10 and 11: Introduction to anisotropic elasticity and thermoelasticity.	X			Previous Reading of proposed themes. Personal work about lesson	1,66	6,5
	28	Resolution of exercises related to Session 21, 23 and 25		X		Personal work about Session 21, 23 and 25 Proposed exercises. Discussion	1,66	
	29	Resolution of exercises related to Session 21, 23 and 25		X		Personal work about Session 21, 23 and 25 Proposed exercises. Discussion	1,66	3,25
Subtotal 1							48	94
Total 1 (Hours of class plus student homework)							142	

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			L E C T U R E S	S E M I N A R S		DESCRIPTION	CLASS HOURS (1,66=50+50 min)	HOMEWORK HOURS (Max. Estim. 6,5h)
15		Tutorials, handing in, etc					3,6	-
16	Assessment						4	10
17								
18								
Subtotal 2							8	10
Total 2 (Hours of class plus student homework)							18	
TOTAL (Maximun 160 horas)							160	