



COURSE: ENGINEERING MATERIALS AND THEIR SELECTION

DEGREE: BACHELOR IN ENGINEERING OF INDUSTRIAL TECHNOLOGIES

YEAR: 4th

TERM: 2nd

WEEKLY PLANNING

WEEK	SESSION	DESCRIPTION	GROUPS		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	Indicate YES/NO If the session needs 2 teachers: Maximum 4 sessions	WEEKLY PROGRAMMING FOR STUDENT		
			LECTURE	SEMINAR			DESCRIPTION	CLASS HOURS	HOMEWORK HOURS Maximum 7 h
1	1	Presentation and objectives of the course.					Exercise 1: properties of materials	1,66	6
1	2	Introduction to materials selection.					Exercise 2: cost of materials	1,66	
2	3	Procedures to select materials (I)						1,66	4
2	4	Procedures to select materials (II)					Exercise 3: selection procedures out of materials industry	1,66	
3	5	Selection according to mechanical properties (I)						1,66	7
3	6	Selection according to mechanical properties (II) and thermal properties					Exercise 4: selection procedure for materials using MCDM	1,66	
4	7	Procedures to select forming processes.						1,66	6
4	8	Rapid prototyping and additive manufacturing					Exercise 5: selection of materials	1,66	
5	9	Materials selection: informatics in lab			2.2C04		Materials' selection using computer programmes	1,66	6
5	10	Materials for nuclear industry					Exercise 6: selection of processes	1,66	
6	11	Materials selection: informatics in lab			2.2C04		Materials' selection using computer	1,66	5

							programmes			
6	12	Materials for aeronautics (I)					Exercise 7: selection through computer programmes	1,66		
7	13	Materials selection: informatics in lab			2.2C04		Materials' selection using computer programmes	1,66	7	
7	14	Materials for aeronautics (II)					Preparation of class presentation	1,66		
8	15	Materials selection: informatics in lab			2.2C04		Materials' selection using computer programmes	1,66	7	
8	16	Materials for aerospace industry (I)					Exercise 8: selection of materials through graphics Exercise 9: rapid prototyping	1,66		
9	17	Materials for aerospace industry (II)						1,66	7	
9	18	Materials for automotive industry (I)					Exercise 10: Materials for aeronautics	1,66		
10	19	Materials for automotive industry (II)						1,66	7	
10	20	Materials for automotive industry (III)					Exercise 11: Materials for automotive industry	1,66		
11	21	Materials for nuclear industry					Exercise 12: Materials for nuclear industry	1,66	7	
11	22	Carbonaceous materials						1,66		
12	23	Nanomaterials						1,66	7	
12	24	Materials for aerogenerators						1,66		
13	25	Intermetallics. Phase change materials. Ecomaterials						1,66		
13	26	Metallic foams								
14										
14										
41,66 76								Subtotal 1	41,66	
Total 1 (Presential and working hours of the student in weeks 1-14)									117,66	
15		Others								
16		Preparing exam and exam								
17									3	15
18										
Subtotal 2								3	15	
Total 2 (Presential and working hours of the student in weeks 15-18)									21	
TOTAL (Total 1 + Total 2. Máximum 180 hours)									138.66	

