



COURSE: MATERIALS SELECTION FOR TRANSPORT AND AEROSPACE INDUSTRIES

DEGREE: BACHELOR IN ENGINEERING OF INDUSTRIAL TECHNOLOGIES

YEAR: 4th

TERM: 1st

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 0: properties of materials	1,66	6
1	2	Introduction to materials selection.					Exercise 1: cost of materials	1,66	
2	3	Procedures to select materials (I)						1,66	4
2	4	Procedures to select materials (II)					Exercise 2: selection procedures out of materials industry	1,66	
3	5	Numerical methods in materials selection						1,66	7
3	6	Selection according to mechanical properties (I)					Exercise 3: selection procedure for materials using MCDM	1,66	
4	7	Selection according to mechanical properties (II) and thermal properties						1,66	6
4	8	Procedures to select forming processes.					Exercise 4: selection of materials	1,66	
5	9	Materials selection: informatics in lab			2.2C04		Materials' selection using computer programmes	1,66	6
5	10	Rapid prototyping and additive manufacturing					Exercise 5: selection of processes	1,66	

6	11	Materials selection: informatics in lab			2.2C04		Materials' selection using computer programmes	1,66		
6	12	Materials for aeronautics (I)					Exercise 6: rapid prototyping s	1,66	5	
7	13	Materials selection: informatics in lab			2.2C04		Materials' selection using computer programmes	1,66		
7	14	Materials for aeronautics (II)					Preparation of class presentation	1,66	7	
8	15	Materials selection: informatics in lab			2.2C04		Materials' selection using computer programmes	1,66		
8	16	Materials for aerospace industry (I)					Exercise 7: graphical selection of materials	1,66	7	
9	17	Materials for aerospace industry (II)					Exercise 8: selection through computer programme	1,66		
9	18	Materials for automotive industry (I)					Exercise 9: Materials for aeronautics	1,66	7	
10	19	Materials for automotive industry (II)						1,66		
10	20	Materials for automotive industry (III)					Exercise 10: Materials for automotive industry	1,66	7	
11	21	Metallic foams						1,66		
11	22	Carbonaceous materials					Exercise 11: Carbonaceous materials	1,66	7	
12	23	Nanomaterials						1,66		
12	24	Intermetallics. Phase change materials. Ecomaterials						1,66	7	
13	25	Public presentation						1,66		
13	26									
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		
18									15	
Subtotal 2								3	15	
Total 2 (Presential and working hours of the student in weeks 15-18)								21		
TOTAL (Total 1 + Total 2. <i>Máximum 180 hours</i>)								138.66		