

COURSE: Production systems and manufacturing technologies		
DEGREE: Bachelor in Industrial Technologies Engineering	YEAR: 3º	TERM: 1º

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	Introduction to manufacturing and production systems.	X			Pre-reading class topics.	1,66	6,5
	2	Manufacturing time and costs. Problems.		X		Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	
2	3	Concurrent engineering. Environmental aspects in production processes. Manufacturing processes definition. Organizational Company chart. Associated documents.	X			Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	6,5
	4	Manufacturing processes definition problems.		X		Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	
3	5	Metal forming: Introduction. Presses.	X			Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	6,5
	6	Presses problems		X		Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	

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4	7	Roll forming. Sheet metal cutting: Other cutting processes. Punching (theory and problems).	X			Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	6,5
	8	LAB SESSION 1: Forming by shape deformation I. Presses and tools.		X	Mechanical Engineering Laboratory	Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	
5	9	Bending. Deep drawing.	X			Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	6,5
	10	Sheet metal forming problems.		X		Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	
6	11	Deep drawing (II). Extrusion. Forging.	X			Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	6,5
	12	Introduction to machining processes: Tool geometries. Cutting parameters.		X		Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	
7	13	TEST 1. Tool wear. Timing and costs.	X			Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	6,5
	14	LAB SESSION 2: Forming by machining: Cutting tools and tool-machines CNC.		X	Mechanical Engineering Laboratory	Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	
8	15	Turning I.	X			Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	6,5

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	16	Turning problems.		X		Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	0,5
9	17	Turning II. Milling	X			Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	6,5
	18	Milling problems.		X		Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	
10	19	Drilling. Grinding	X			Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	6,5
	20	Machining problems.		X		Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	
11	21	Procesos de conformado por moldeo.	X			Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	6,5
	22	LAB SESSION 3: Sheet metal forming. Numerical modeling approach.		X	Virtual Classroom	Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	
12	23	Automated production systems.	X			Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	6,5
	24	LAB SESSION 4: CAD-CAM.		X	Virtual Classroom	Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	

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13	25	Measurement systems and quality control of production processes.	X			Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	6,5	
	26	Automated production systems problems.		X		Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66		
14	27	TEST 2. Measurement systems and quality control of production processes problems.	X			Lectura previa de los temas de clase y repaso de los conceptos relacionados tratados en clases anteriores	1,66	6,5	
	28	Manufacturing of plastic elements. Injection molding.		X		Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66		
	29	Production and Manufacturing Systems problems.		X		Pre-reading class topics and reviewing the related concepts discussed in previous classes.	1,66	3,25	
Subtotal 1							48	94	
Total 1 (Hours of class plus student homework)							142		
15		Tutorials, handing in, etc					3,6	-	
16	17 18	Assessment					4	10	
17									
18									
Subtotal 2							8	10	
Total 2 (Hours of class plus student homework)							18		
TOTAL A (Maximun 160 horas)							160		

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LABORATORIES CLASSES PROGRAMMING						
WEEK	SESSION	DESCRIPTION	LABORATORY	WEEKLY PROGRAMMING FOR STUDENT		
				DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. Estim. 6,5h)
	1				1,66	6,5
	2				1,66	
Subtotal 3					3,5	6,5
Total 3 (Hours of class plus student homework)					10	
TOTAL B (Total 3)					10	
TOTAL (Total A + Total B. <i>Maximun 170 horas</i>)					170	