uc3m | Universidad Carlos III de Madrid
Vicerrectorado de Estudios
Apoyo a la docencia y gestión del grado

COURSE: INDUSTRIAL DESIGN		
DEGREE: MECHANICAL ENGINEER	YEAR: 4	TERM: 1

WEEKLY PLANNING

WEEK	SESSION	DESCRIPTION	TEACHING (mark X)		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	WEEKLY PROGRAMMING FOR STUDENT		
			LECTURES	SEMINARS		DESCRIPTION	CLASS HOURS (1,66=50+50 min)	HOMEWORK HOURS (Max. Estim. 6,5h)
1	1						1,66	4,5
	2	INTRODUCTION TO INDUSTRIAL DESIGN	X			The scope of design. Product life cycle. Integrated design. Methods for evaluating solutions	1,66	
2	3	DESIGN PROCESS I		X		Design process phases: requirement list (design specification), concept (principle solution), embodiment design (preliminary layout), detail design (production documentation)	1,66	6,5
	4	DESIGN PROCESS II	X			VDI guideline 2221 application	1,66	
3	5	DESIGN TOOLS I		X		Design for manufacturing (DFM) and for assembly (DFA)	1,66	6,5
	6	DESIGN TOOLS II	X			Design for quality (DFQ): Failure Modes and Effects Analysis (FMEA), Design of Experiments (DOE), Quality Function Deployment (QFD)	1,66	

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4	7	DESIGN TOOLS III		X		Design for environment (DFE): reliability and maintenance, enviorement impact, End-of-life concerns	1,66	6,5
	8	MATERIAL SELECTION	X			Material selection criteria. Properties of materials most commonly used in industrial design	1,66	
5	9	PACKAGING		X		Package and containers design	1,66	5,5
	10	ERGONOMY	X			Human Factor in design	1,66	
6	11	PRODUCT SAFETY		X		Regulations related to industrial products. Product safety evaluation	1,66	5,5
	12	3D PRINTING	X			3D printing design principles	1,66	
7	13	EU MACHINERY DIRECTIVE		X		Machinery directive analysis and cases study	1,66	5,5
	14	INDUSTRIAL QUALITY AND SAFETY	X			Quality and safety application to the industri	1,66	
8	15	HEALTH AND SAFETY RISK ASSESSMENT		X		Machine health and safety risks evaluation. Case study	1,66	5,5
	16	CAD-CAM-CAE SYSTEMS	X			Introduction to CAD-CAM-CAE systems	1,66	
9	17	CAD Design		X	a de informá	CAD-CAM-CAE application to industrial design	1,66	6,5
	18	CONTINUOUS ASSESSMENT TEST	X			Continuous assessment test	1,66	
10	19	DESIGN OF ELEMENTS AND COMPONENTS: BEARINGS I		X		Machine elementes learning: bearings	1,66	5,5
	20	DESIGN OF ELEMENTS AND COMPONENTS: BEARINGS II	X			Machine elementes learning: bearings	1,66	
11	21	CLASS PRACTICE 3	Desdobla		1.1.N04	Health and Safety Risk Evaluation	1,66	5,5
	22	DESIGN OF ELEMENTS AND COMPONENTS: BELTS I	X			Machine elementes learning: belts I	1,66	
12	23	DESIGN OF ELEMENTS AND COMPONENTS: BELTS II		X		Machine elementes learning: belts II	1,66	5,5
	24	ACOUSTICS I	X			Acoustic principles	1,66	
13	25	ACOUSTICS II		X		Acoustic case study	1,66	5,5
	26	CAR BODY DESIGN	X			Design application to automobiles body	1,66	

WEEKLY PLANNING

WEEK	SESSION	DESCRIPTION	TEACHING (mark X) LECTURES	TEACHING (mark X) SEMINARS	SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	WEEKLY PROGRAMMING FOR STUDENT DESCRIPTION	CLASS HOURS (1,66=50+50 min)	HOMEWORK HOURS (Max. Estim. 6,5h)
14	27	CLASS PRACTICE 4	Desdobla		1.1.N04	Industrial design development	1,66	6,5
	28	INDUSTRIAL DESIGN CASE I	X			Industrial design case study I	1,66	
	29	INDUSTRIAL DESIGN CASE II		X		Industrial design case study II	1,66	3,25
						Subtotal 1	**48**	**84**
						Total 1 *(Hours of class plus student homework)*	**132**	
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*)							**150**	