Universidad Carlos III de Madrid
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COURSE: 2014-2015		
DEGREE: Aerospace Engineering	**YEAR: 4**	**TERM: 1**

WEEKLY PLANNING

WEEK	SESSION	DESCRIPTION	GROUPS (mark X)		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	Indicate YES/NO If the session needs 2 teachers	WEEKLY PROGRAMMING FOR STUDENT		
			LECTURES	SEMINARS			DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)
1	1	Introduction to structural dynamics. Type of problems. 1DOF free response Systems.	X			NO		1,6	7
1	2	Exercises on 1 DOF systems (Free response)	X			NO		1,6	
2	3	Forced response + Random excitation. Modeling	X			NO		1,6	7
2	4	Problem session 2. Forced response problems & introduction to 2 dof problems.	X	X		NO		1,6	
3	5	Analytical Mechanics and application to structural dynamics.	X			NO		1,6	7
3	6	Introduction to NASTRAN			X	Yes		1,6	
4	7	N-DOF. Modal analysis vs 2dof standard solution.	X			NO		1,6	7
4	8	Problem session 3: Modal analysis problems	X	X		NO		1,6	
5	9	Introduction to continuous systems. Axial	X			NO		1,6	7

5	10	Problems. Continuous systems	X	X		NO		1,6	
6	11	Approximate methods	X			NO		1,6	7
6	12	Applications of approximate methods	X			NO			
7	13	Introduction to experimental Analysis & FEM.	X			NO		1,6	
7	14	Introduction to PATRAN	X		X	YES		1,6	7
7	29	Dynamics. Review and exercise.	X			NO		1,6	
8	15	Introduction to mechanism.	X			NO	It is required the use of compass, a 45º and 60/30º set-squares,a rule and a protractor (please bring this staff to class)	1,6	7
8	16	Introduction to mechanism: Problems		X			This session will be performed in a computer room	1,6	
9	17	Drives I: Gears	X			NO	Theory and examples.	1,6	7
9	18	Drives I: Gears problems		X			Problems	1,6	
10	19	Drives I: Gears Trains	X			NO	Theory and examples.	1,6	7
10	20	Drives I: Gears Trains problems		X			Problems	1,6	
11	21	Drives II: Belt and friction drives	X			NO	Theory and examples.	1,6	7
11	22	Drives II: Belt and friction drives problems		X			Problems	1,6	
12	23	Drives III: Cams	X			NO	Theory and examples.	1,6	7
12	24	Drives III: Cams Problems		X			Problems	1,6	
13	25	Bearings I.	X			NO	Theory and examples.	1,6	7
13	26	Bearings I:Problems		X			Problems	1,6	
14	27	Bearings II.	X			NO	Theory and examples.	1,6	7
14	28	Bearings II: Problems		X			Problems	1,6	

							Subtotal 1	**48,33**	**105**
		Total 1 *(Hours of class plus student homework hours between weeks 1-14)*							
15	30								
16		Assessment						3	
							Subtotal 2	**3**	**3**
		Total 2 *(Hours of class plus student homework hours between weeks 15-18)*							
TOTAL *(Total 1 + Total 2. Maximum 180 hours)*								**156**	