Universidad Carlos III de Madrid

COURSE:	The Finite Element Method applied to Solid Mechanics (El Método de los Elementos Finitos Aplicados a Mecánica de Sólidos)		
POSTGRADUATE PROGRAM: UNIVERSITY MASTER ON INDUSTRIAL MECHANICS Instructors: Guadalupe Vadillo Martín		ECTS: 6	TERM: 1

WEEKLY PLANNING

WEEK	SESSION	DESCRIPTION	GROUP		SPECIAL ROOM FOR SESSION: Computer classroom (CC) Audiovisual room (AVC)	WEEKLY PROGRAMMING FOR STUDENT		
			1	2		DESCRIPTION	CLASS HOURS	HOMEWORK HOURS. Max 7 per week
1	1	Presentation	X				1.5	0
1	2	Theme 1.- Introduction to FEM. (1)	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	6
2	3	Theme 1.- Introduction to FEM. (2)	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	6
3	4	Theme 1.- Introduction to FEM. (3)	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	6
3	5	Theme 1.- Introduction to FEM. (4)	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	0

4	6	Theme 2.- FEM in Elasticity: 1D Elements	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	6
5	7	Theme 2.- FEM in Elasticity (2): 1D Elements	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	6
5	8	Theme 2.- FEM in Elasticity (3): 2D Elements	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	0
6	9	Theme 2.- FEM in Elasticity (4): 2D Elements	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	6
7	10	Computer session	X		CC	Reading and study of theory. Solution calculation and interpretation of results.	1.5	6
7	11	Theme 2.- FEM in Elasticity (5): 3D Elements	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	0
8	12	Computer session	X		CC	Reading and study of theory. Solution calculation and interpretation of results.	1.5	6
9	13	Tema 3.- FEM in Elasticity (6): Numerical Integration	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	6
9	14	Tema 3.- FEM in Elasticity (7): Numerical Integration	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	0

10	15	Computer session	X		CC	Reading and study of theory. Solution calculation and interpretation of results.	1.5	6
11	16	Tema 3.- FEM in Elasticity (8): Numerical Integration	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	6
11	17	Tema 3.- FEM applied to non linear problems (1)	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	0
12	18	Computer session	X		CC	Reading and study of theory. Solution calculation and interpretation of results.	1.5	6
13	19	Tema 4.- FEM applied to dynamic problems (1)	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	6
13	20	Tema 4.- FEM applied to dynamic problems (2)	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	0
14	21	Tema 5.- FEM applied to fracture	X			Reading and study of theory. Solution calculation and interpretation of results.	1.5	6
15		Class, tutorials, Project reports etc	X			Preparation of final projects and reports	7.5	12
		Exam preparation and attendance				Review of procedures seen in the practical sessions. Final Exam.	3	12

TOTAL HOURS						42	108