Universidad Carlos III de Madrid
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COURSE: NUMERICAL SIMULATION OF INDUSTRIAL FLOWS		
DEGREE: MECHANICAL ENGINEERING	**YEAR: 4th**	**TERM: 2**

WEEKLY PLANNING

WEEK	SESSION	DESCRIPTION	GROUPS (mark X)		Special room for session (computer classroom, audio-visual classroom…)	YES/NO session with 2 teachers	WEEKLY PROGRAMMING FOR STUDENT		
			LECTURES	SEMINARS			DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)
1	1	Presentation of the subject. General equations of Fluid Dynamics.	X			No	Individual study	1,66	2
2	2	Numerical techniques in CFD. Finite volume method.	X			No	Individual study	1,66	2
3	3	Domain discretization. Introduction of meshing tools in Ansys Workbench.		X	Computer classroom	No	Individual study	1,66	2
4	4	Numerical simulation of a steady laminar flow (i)		X	Computer classroom	No	Work on the class problem and preparation of the report	1,66	2
5	5	Numerical simulation of a steady laminar flow (ii)		X	Computer classroom	No	Work on the class problem and preparation of the report	1,66	2
6	6	Numerical simulation of a 3d unsteady flow (i)		X	Computer classroom	No	Work on the class problem and preparation of the report	1,66	2
7	7	Numerical simulation of a 3d unsteady flow (ii)		X	Computer classroom	No	Work on the class problem and preparation of the report	1,66	2

8	8	Turbulent flows.	X			No	Individual study	1,66	2
9	9	Numerical modeling of turbulent flows.	X			No	Individual study	1,66	2
10	10	Numerical simulation of a turbulent flow in aerodynamics		X	Computer classroom	No	Work on the class problem and preparation of the report	1,66	2
11	11	Mid-term theory exam.	X			No	Individual study	1,66	2
12	12	Work on final simulation project.		X	Computer classroom	No	Work on final simulation project.	1,66	2
13	13	Work on final simulation project.		X	Computer classroom	No	Work on final simulation project.	1,66	2
14	14	Oral presentation of final projects.		X		Yes	Work on final simulation project.	1,66	2
							Subtotal 1	**23,33**	**28**
		Total 1 *(Hours of class plus student homework hours between weeks 1-14)*							
15		Tutorials, handing in, etc							
16		Assessment							
17									
18									
							Subtotal 2		
		Total 1 *(Hours of class plus student homework hours between weeks 15-18)*							
TOTAL *(Total 1 + Total 2)*									