



COURSE: Advanced Aeroelasticity		
MASTER: Aerospace Engineering	YEAR: 1st	TERM: 2nd

La asignatura tiene 14 sesiones que se distribuyen a lo largo de 14 semanas.

WEEKLY PLANNING									
WEEK	SESSION	DESCRIPTION	GROUPS (mark X)		SPECIAL ROOM FOR SESSION (Computer classroom, audiovisual classroom)	Indicate YES/NO If the session needs 2 teachers	WEEKLY PROGRAMMING FOR STUDENT		
			LECTURES	SEMINARS			DESCRIPTION	CLASS HOURS	HOME WORK HOURS (Max. 7h week)
1	1	Aeroelasticity. Getting Started.	X				Reading corresponding notes chapters Study and personal work about the lecture. Perform Homework RCA.	1,6	2
2	2	2D Aeroelasticity. Divergence	X				Reading corresponding notes chapters Study and personal work about the lecture. Perform Homework RCA.	1,6	3

3	3	Control Reversal. 3D Aeroelasticity	X			Reading corresponding notes chapters Study and personal work about the lecture. Perform Homework RCA.	1,6	3
4	4	Structural Model and Mode Shapes	X			Reading corresponding notes chapters Study and personal work about the lecture. Perform Homework RCA.	1,6	3
5	5	GVT & Experimental Modal Analysis	X			Reading corresponding notes chapters Study and personal work about the lecture. Perform Homework RCA	1,6	3
6	6	Unsteady Aerodynamics. DLM	X			Reading corresponding notes chapters Study and personal work about the lecture. Perform Homework: derive half (S) and half(A) model starting from a complete aircraft model.	1,6	3
7	7	Partial Exam 1	X			Study Partial Exam 1	1,6	7
8	8	Flutter equation and its solution	X			Reading corresponding notes chapters Study and personal work about the lecture. Prepare Partial1 exam.	1,6	3
9	9	Flutter speed sensitivities. Massbalance. FCS	X			Reading corresponding notes chapters Study and personal work about the lecture. Perform Homework: determination of elevator effectiveness.	1,6	3

10	10	FVT. Aeroelastic Model Validation	X				Reading corresponding notes chapters Study and personal work about the lecture. Perform homework: determination of aileron massbalance to prevent flutter.	1,6	3
11	11	The concept of load	X				Reading corresponding notes chapters Study and personal work about the lecture.	1,6	3
12	12	Dynamic ground loads	X				Reading corresponding notes chapters Study and personal work about the lecture.	1,6	3
13	13	Discrete tuned gust	X				Reading corresponding notes chapters Study and personal work about the lecture		
14	14	Continuous Turbulence (CT)	X				Reading corresponding notes chapters Study and personal work about the lecture	1,6	3
15	15	Partial Exam 2	X				Study Partial Exam 2.	1,6	7
		Final Exam:						1,6	
Subtotal 1								24	49
Total 1 (Hours of class plus student homework hours between weeks 1-14)								73	

15		Tutorials, handing in, etc						0,5	0,5
16		Assessment						0,5	0,5
17									

18											
									Subtotal 2	1	1
									Total 2 (<i>Hours of class plus student homework hours between weeks 15-18</i>)	2	

TOTAL (<i>Total 1 + Total 2. Maximum 90 hours</i>)										75
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