

COURSE: INTERNAL COMBUSTION ENGINES		
DEGREE: MECHANICAL ENGINEERING	YEAR: 4th	TERM: 2nd

WEEKLY PLANNING								
WEEK	SESSION	DESCRIPTION	TEACHING (mark X)		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	WEEKLY PROGRAMMING FOR STUDENT		
			L E C T U R E S	S E M I N A R S		DESCRIPTION	CLASS HOURS (1,66=50+50 min)	HOMEWORK HOURS (Max. Estim. 3,25h)
1	1	1.1.- Internal combustion engines: introduction. Gas exchange processes.	X		NO	Reading of the material delivered by the course instructor and available on Aula Global. Collection of the necessary data for the elaboration of the individual exercise.	1.66	3
2	2	1.2.- Internal combustion engines: applied exercises about the gas charging process.	X		NO	Reading of the material delivered by the course instructor and available on Aula Global. Solution of applied excercises.	1.66	3
3	3	1.3.-Internal combustion engines: combustion in spark-ignition engines.	X		NO	Reading of the material delivered by the course instructor and available on Aula Global.	1.66	3.25
4	4	1.4.- Internal combustion engines: combustion in compression-ignition engines.	X		NO	Reading of the material delivered by the course instructor and available on Aula Global.	1.66	3.25
5	5	1.5.- Internal combustion engines: variation of the engine performance with the ambient operating conditions. Engine operating characteristics. Formulas of power correction. Applied exercise.	X		NO	Solution of applied excercises available on Aula Global.	1.66	3.25

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6	6	1.6.- Internal combustion engines: turbocharging. Energy contained in the exhaust gases. Technologies used for turbocharging.	X		NO	Reading of the material delivered by the course instructor and available on Aula Global.	1.66	3.25
7	7	2.1.- Gas turbines: fundamentals of turbomachinery. Presentations of the 5 best works of students.	X		NO	Reading of the material delivered by the course instructor and available on Aula Global. Preparation of the presentation of the work performed in the individual exercise.	1.66	3.25
8	8	Laboratory 1: Architecture of engines.		X	Laboratorio	Elaboration of a report about the observations performed in the laboratory and the comments of the instructor. Group work.	1.66	3.25
9	9	Laboratory 2: Individual exercise on the performance prediction of reciprocating internal combustion engines.		X	Laboratorio	Elaboration of a report about the observations performed in the laboratory and the comments of the instructor. Group work.	1.66	3.25
10	10	Partial examination of reciprocating internal combustion engines.	X		NO	Individual study to prepare the exam.	1.66	3.25
11	11	2.2.- Gas turbines: real cycles of gas turbines (GTs).	X		NO	Reading of the material delivered by the course instructor and available on Aula Global.	1.66	3.25
12	12	2.3.- Gas turbines: operation modes of GTs	X		NO	Reading of the material delivered by the course instructor and available on Aula Global.	1.66	3.25
13	13	2.4.- Gas turbines: characteristics curves of GTs	X		NO	Reading of the material delivered by the course instructor and available on Aula Global.	1.66	3.25
14	14	2.5.- Gas turbines: exercises applied to GTs.	X		NO	Solution of proposed exercises available on Aula Global.	1.66	3.25

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15		Additional session					1.66	3.25
Subtotal 1							25	48
Total 1 (Hours of class plus student homework)							73	
15		Tutorials, handing in, etc					1.8	-
16		Assessment					4	4
17								
18								
Subtotal 2							6	4
Total 2 (Hours of class plus student homework)							10	
TOTAL (<i>Maximun 83 horas</i>)							83	