Universidad Carlos III de Madrid
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DENOMINACIÓN ASIGNATURA: Digital systems applied to electrical power engineering		
GRADO: Bachelor in Electrical Power Engineering	CURSO: 3º	CUATRIMESTRE: 2º

PLANIFICACIÓN SEMANAL DE LA ASIGNATURA								
SEMANA	SESIÓN	DESCRIPCIÓN DEL CONTENIDO DE LA SESIÓN	GRUPO (marcar X)		Indicar espacio distinto de aula (aula informática, audiovisual, etc.)	Indicar SI/NO es una sesión con 2 profesores	TRABAJO SEMANAL DEL ALUMNO	
			GRANDE	PEQUEÑO			DESCRIPCIÓN	HORAS PRESENCIALES	HORAS TRABAJO (Max. 7h semana)
1	1	Introduction. Digital electronic fundamentals (1)	x				Work on the proposed topics	1,66	
1	2	Digital electronic fundamentals (2)		x			Work on the proposed topics	1,66	2
2	3	Combinational systems. Binary arithmetics	x				Work on the proposed topics	1,66	
2	4	Introduction to the implementation on FPGAs. Quartus II		x	Computer room		Work on the proposed topics	1,66	4
3	5	Secuential systems. Registers and counters	x				Work on the proposed topics	1,66	
3	6	Design and implementation of a digital circuit on FPGA		x			Work on the proposed topics	1,66	4
4	7	Capstone project 1	x		Lab		Work on the capstone project	1,66	
4	8	Capstone project 1		x	Lab		Work on the capstone project	1,66	7
5	9	Capstone project 1	x		Lab		Work on the capstone project	1,66	4

5	10	Capstone project 1		x	Lab	YES	Work on the capstone project	1,66	
6	11	Introduction to microcontrollers. Introduction to C programming language (1)	x				Work on the proposed topics	1,66	
6	12	Capstone project 1		x	Lab	YES	Work on the capstone project	1,66	4
7	13	Introduction to C programming language C (2). I/O and timers	x				Work on the proposed topics	1,66	
7	14	Get started with Energia		x	Lab		Work on the proposed topics	1,66	7
8	15	Serial communication	x				Work on the proposed topics	1,66	
8	16	Examples and exercises		x	Lab		Work on the proposed topics	1,66	4
9	17	PWM and A/D	x				Work on the proposed topics	1,66	
9	18	Examples and exercises		x	Lab		Work on the proposed topics	1,66	7
10	19	Interruptions	x				Work on the proposed topics	1,66	
10	20	Examples and exercises		x	Lab		Work on the proposed topics	1,66	
10	21	Examples and exercises		x	Lab		Work on the proposed topics	1,66	6
11	22	Examples and exercises	x		Lab		Work on the proposed topics	1,66	
11	23	Examples and exercises		x	Lab		Work on the proposed topics	1,66	7
12	24	Capstone project 2	x		Lab		Work on the capstone project	1,66	
12	25	Capstone project 2		x	Lab		Work on the capstone project	1,66	4
13	26	Capstone project 2	x		Lab		Work on the capstone project	1,66	
13	27	Capstone project 2		x	Lab	YES	Work on the capstone project	1,66	7
14	28	Capstone project 2	x		Lab		Work on the capstone project	1,66	
14	29	Capstone project 2		x	Lab	YES	Work on the capstone project	1,66	7
							Subtotal 1	**48,14**	**74**
		Total 1 *(Horas presenciales y de trabajo del alumno entre las semanas 1-14)*						122,14	
15		Recuperaciones, tutorías, entrega de trabajos, etc						7	
16									
17		Preparación de evaluación y evaluación						3	
18									21
							Subtotal 2	**3**	
		Total 2 *(Horas presenciales y de trabajo del alumno entre las semanas 15-18)*						31	

TOTAL *(Total 1 + Total 2. Máximo 180 horas)*	153,14