uc3m | Universidad **Carlos III** de Madrid
Vicerrectorado de Estudios
Apoyo a la docencia y gestión del grado

COURSE: MICROPROCESSOR BASED DIGITAL SYSTEMS		
DEGREE: TELECOMMUNICATION RELATED BACHELORS	YEAR: 2	TERM: 2

WEEKLY PLANNING							
WEEK	**SESSION**	**DESCRIPTION**	**TEACHING (mark X)**		**SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)**	**WEEKLY PROGRAMMING FOR STUDENT**	
			LECTURES	**SEMINARS**		**DESCRIPTION**	**CLASS HOURS (1,66=50+50 min)**	**HOMEWORK HOURS (Max. Estim. 6,5h)**
1	1	Chapter 1: Introduction	x			Study theoretical concepts	1,66	6,5
	2	Chapter 2: Microprocessors and Microcontrollers		x		Study theoretical concepts	1,66	
2	3	Chapter 3: Internal Architecture	x			Study theoretical concepts	1,66	6,5
	4	Chapter 3: Internal Architecture. Exercises		x		Study theoretical concepts. Complete the exercises proposed	1,66	
3	5	Chapter 4: Assembler	x			Study theoretical concepts	1,66	6,5
	6	Chapter 4: Assembler. Exercises		x		Study theoretical concepts. Complete the exercises proposed	1,66	
4	7	Chapter 5: Development Environment, examples of basic GPIO	x			Study theoretical concepts. Complete the exercises proposed	1,66	6,5
	8	Chapter 5: Demo with development board & Chapter 6: GPIO, AF		x	Laptop, board	Study theoretical concepts. Complete the exercises proposed	1,66	
5	9	Case study 1 with all GPIO (chapter 6)	x			Study theoretical concepts. Complete the exercises proposed.	1,66	6,5
	10	Partial exam (Architecture)		x		Study for the exam	1,66	
6	11	Chapter 7: Interrupts & EXTI	x			Study theoretical concepts	1,66	6,5
	12	Lab1: GPIO		x	board	Practical work	1,66	

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7	13	Chapter 8: Timers (part 1)	x			Study theoretical concepts	1,66	6,5
	14	Case study 2 with Timers 1, IRQ, EXTI		x		Study theoretical concepts. Complete the exercises proposed.	1,66	
8	15	Chapter 8: Timers (part 2)	x			Study theoretical concepts	1,66	6,5
	16	Case study 3, timing		x		Study theoretical concepts. Complete the exercises proposed.	1,66	
9	17	Chapter 9: ADC, DAC	x			Study theoretical concepts	1,66	6,5
	18	Lab2: TIM		x	board	Practical work	1,66	
10	19	Chapter 10: Hardware Abstraction Layers	x			Study theoretical concepts	1,66	6,5
	20	Case study 4 with ADC, DAC, timing & IRQs (using registers)		x		Study theoretical concepts. Complete the exercises proposed.	1,66	
11	21	Chapter 11: Serial Communication (USART,SPI/I2C)	x			Study theoretical concepts	1,66	6,5
	22	Lab3: ADC, ADC		x	board	Practical work	1,66	
12	23	Chapter 12: Design and analysis of solutions & special functions (part 1)	x			Study theoretical concepts	1,66	6,5
	24	Lab4: Integrations & communications		x	board	Practical work	1,66	
13	25	Chapter 12: Design and analysis of solutions & special functions (part 2)	x			Exercises	1,66	6,5
	26	Exam problems		x		Exercises	1,66	
14	27	Exam problems	x			Exercises	1,66	6,5
	28	Partial exam (Analysis)		x		Study for the exam	1,66	
	29	Exam problems		x		Exercises	1,66	3,25
		Subtotal 1					**48**	**94**
		Total 1 *(Hours of class plus student homework)*						**142**

15		Tutorials, handing in, etc					3,6	-
16								

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			LECTURES	SEMINARS		DESCRIPTION	CLASS HOURS (1,66=50+50 min)	HOMEWORK HOURS (Max. Estim. 6,5h)
17		Assessment					4	10
18								
						Subtotal 2	8	10
						Total 2 *(Hours of class plus student homework)*		18

TOTAL (*Maximun 160 horas*)	160