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

COURSE: MICROPROCESSORS		
DEGREE: Bachelor in Industrial Electronics and Automation Engineering	YEAR: 4	TERM: 1

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	Introduction and review of basic concepts	X			Review	1,66	6,5
	2	Chapter 1. ARM-CORTEX M3 Family, internal architecture (1)		X		Study of material	1,66	
2	3	Chapter 1. ARM-CORTEX M3 Family, internal architecture (2)	X			Study of material. Solve proposed exercises	1,66	6,5
	4	Chpater 2. Real-time programming, structured programming, C for microcontrollers, Selected toolchain, Hardware Abstraction Layers		X		Study of material. Solve proposed exercises	1,66	
3	5	Chapter 3. Peripherals, I/O ports, GPIO & AF	X			Study of material. Solve proposed exercises	1,66	6,5
	6	Hands-on session, GPIO		X	Laptop	Trials at home	1,66	
4	7	Chapter 4. Interrupts and EXTIs	X			Study of material. Solve proposed exercises	1,66	6,5
	8	Hands-on session, EXTI		X	Laptop	Trials at home	1,66	
5	9	Chapter 5. Timing and binary signals generation in STM32	X			Study of material. Solve proposed exercises	1,66	6,5
	10	Exam (internal architecture, GPIOs, EXTI)		X		Exam preparation	1,66	
6	11	Chapter 6. Capture and measurement of binary signals in STM32	X			Study of material. Solve proposed exercises	1,66	6,5
	12	Lab1		X	aptop/materi	Practical work in classroom / synchronous online	1,66	

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7	13	Chapter 7. Capture and generation of analog signals in STM32	X			Study of material. Solve proposed exercises	1,66	6,5
	14	Case study 1 with GPIO, EXTI and timing		X		Exercises	1,66	
8	15	Case study 2 with data logger and function generator	X			Exercises	1,66	6,5
	16	Lab2		X	aptop/materi	Practical work in classroom / synchronous online	1,66	
9	17	Chpater 8. Serial interfaces in STM32	X			Study of material. Solve proposed exercises	1,66	6,5
	18	Lab3		X	aptop/materi	Practical work in classroom / synchronous online	1,66	
10	19	Case study 3, Serial communications using HAL	X			Study of material. Solve proposed exercises	1,66	6,5
	20	Case study 4, signal processing and communications (1)		X		Exercises	1,66	
11	21	Chapter 9. Energy saving, execution control, oscillators and clocks in STM32	X			Study of material. Solve proposed exercises	1,66	6,5
	22	Lab 4		X	aptop/materi	Practical work in classroom / synchronous online	1,66	
12	23	Case study 4, signal processing and communications (2)	X			Exercises	1,66	6,5
	24	Lab5		X	LAB	Practical work in LAB	1,66	
13	25	Chapter 10. Workshop on applications design	X			Exercises	1,66	6,5
	26	Lab 6- exam about practices		X	aptop/materi	Practical work in classroom / synchronous online	1,66	
14	27	Workshop on final project	X		Laptop/materi	Final project	1,66	6,5
	28	Workshop on final project		X	aptop/materi	Final project	1,66	
	29	Workshop on final project		X	aptop/materi	Final project	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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17 18		Assessment					4	10
						Subtotal 2	**8**	**10**
						Total 2 *(Hours of class plus student homework)*	**18**	
TOTAL (*Maximun 160 horas*)							**160**	