



COURSE: Electronic Digital Systems		
DEGREE: Bachelor in Industrial Technology Engineering	YEAR: 4	TERM: 2

WEEKLY PLANNING									
WEEK	SESSION	DESCRIPTION	GROUPS (mark X)		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	Indicate YES/NO If the session needs 2 teachers	WEEKLY PROGRAMMING FOR STUDENT		
			LECTURES	SEMINARS			DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)
1	1	Presentation of the subject Introduction to the microprocessor use and development platform	x				Opening the process of creating groups lab. Presentation of projects	1,66	2
1	2	Introduction to the microprocessor use and development platform	x				Presentation of the microprocessor used in the projects and study software development	1,66	
2	3	80C51 microcontroller	x				Understanding of the organization of an application in real time. Handling A / D and D / A and asynchronous event handling	1,66	4

2	4	Example of creating a C program on the platform. prototype program	x				Example in the classroom using a PC editing, development and compilation of a program. Elaboration of the prototype program	1,66	
3	5	Systems A / D and D / A	x				Study connection methods and device access to digital analog converters are studied with a microprocessor	1,66	6
3	6	Exercise: editing and compiling prototype program		x	x		Download tool development and prototype editing and recompiling the program.	2,5	
4	7	Control techniques using PWM and PDM	x				Implementation are studied with a microprocessor and a PWM modulator PDM and interface circuitry to control power loads.	1,66	4
4	8	Practical exercise: Development and debugging a program management A / D and D / A by interruptions		x	x		A program in C language for learning management of an A / D and D / A will be prepared.	2,5	
5	9	Study of a direct digital control system	x				PI control implemented discretely in a microprocessor and its execution will be analyzed in real time.	1,66	5
5	10	Practical exercise: Programming a PWM modulator using the development system		x	x		Implementation of a PWM modulator is carried out with a microprocessor.	2,5	
6	11	Projects I	x				Explanation of projects I	1,66	5
6	12			x	x			1,66	
7	13	Projects II	x				Explanation of projects II	1,66	6
7	14	Exercise: Simulation of a control system		x	x		Elaboration of a model of behavior of a control system.	1,66	
8	15	Choice of project. Planning tutored work. Realization of the project.	x				Decision on project selection.	1,66	4
8	16	Elaboration of the minimum program. Minimum hardware system design.		x	x			2,5	
9	17							0	4
9	18	Testing hardware-software integration minimum system.		x	x			2,5	

10	19							0	4
10	20	Evaluation of the minimum project. Design Hardware and software extensions to the minimum project.		x	x			2,5	
11	21	Revision lecture	x					1,66	4
11	22	Realization of extensions to a minimum project		x	x			2,5	
12	23							0	6
12	24	Realization of extensions to a minimum project		x	x			2,5	
13	25	Structure and preparation work memory of the subject	x					1,66	7
13	26	Realization of extensions to a minimum project		x	x			2,5	
14	27							0	7
14	28	Realization of extensions to a minimum project		x	x			2,5	6

0

Total 1 (Hours of class plus student homework hours between weeks 1-14)

48,33 **58**

15		Tutorials, handing in, etc						19	
16		Assessment						3	
17									25
18									

3

3

Total 2 (Hours of class plus student homework hours between weeks 15-18)

28

140

TOTAL A (Total 1 + Total 2)

150