Universidad Carlos III de Madrid
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COURSE: PROGRAMMING		
DEGREE: GRADE IN INDUSTRIAL TECHNOLOGY ENGINEERING	**YEAR: 1**	**TERM: 1**

WEEKLY PLANNING

WEEK	SESSION		GROUPS		Indicate YES/NO If the session needs 2 teachers	WEEKLY PROGRAMMING FOR STUDENT		
			LECTURES	COMPUTER LAB		DESCRIPTION	CLASS HOURS	HOMEWORK HOURS
1 *Sep 2nd*		**Course Overview:** **Contents, bibliography, teaching materials, course planning, methodology**	x		NO	Course Overview Get familiar with the course material and schedule	1,66	1
2 *Sep 9th*	**2**	**Introduction to Units 1 and 2 (1. Introduction to computer science and programming, 2 Software and Hardware)** **Unit 3. Introduction to Programming in C.** **Basic program structure. Variables and constants. Operators: arithmetic and assignment operators**	x		NO	Read Guide "How to study Unit 1 and 2" Read material for Unit 1	1,66	7
2	3	Computer Lab. Session 1. U3. Introduction to the DevC++ (Development Environment)		X	NO	Download and install DevC++ (Our Developing Environment)	1,66	
3 *Sep 16th*	**4**	**Unit 3. Simple data types. Operators, expressions and instructions. Relational operators. Logical Operators. Input and output instructions**	x		NO	Read material for Unit 2 Revise Unit 3 Prepare Lab Session 2.	1,66	7
3	5	Computer Lab. Session 2. T3. Structure and main characteristics of a C program.		X	NO	Revise Lab Session 2 and complete any unfinished exercises	1,66	
4 *Sep 23rd*	**6**	**Unit 4. Flow Control structures. Session 1** **Conditional structures: if-else, switch**	x		NO	Revise Unit 4. Part 1. Problems: input and output instructions	1,66	7
4	7	Computer Lab. Session 3.T4. Conditional structures if-else, switch		x	NO	Understand and complete all the proposed exercises	1,66	
5 *Sep, 30th*	**8**	**Unit 4. Flow Control structures. Session 2. Loops** **Loop instructions: for, while and do-while**	x		NO	Revise Unit 4. Part 2. Problems: control structures	1,66	7

5	9	Computer Lab. Session 4. T4. Loops.		x	NO	Revise Lab Session and complete any unfinished exercises	1,66	
6 *Oct, 7th*	**10**	**Unit 4. Flow Control structures. Session 3.** **Control structure nesting** **Exercises (**Magic number)	x			Revise Unit 4. Exercises' about control structures	1,66	7
6	11	Computer Lab. Session 5. T4. Nested control flow and loops: Exercises. Friday, 11 October is public holiday		x	NO	Understand and complete all the proposed practical exercises	1,66	
7 *Oct, 14th*	**12**	**Unit 5. Functions. Session 2** **Parameters: call by value. Pointer type. Parameters: call by reference.** **Scope of variables in functions:** **Library functions and standard C libraries**	x		**NO**	Revise Unit 5. Part 1 Problems: functions	1,66	7
7	13	Computer Lab. Session 6a. T5. Functions		x	NO	Revise Lab Session and complete any unfinished exercises	1,66	
8 *Oct, 21st*	**14**	**Unit 5. Functions. Session 2** **Pointer type. Parameters: call by reference. Scope of variables in functions:** **Library functions and standard C libraries**	x		NO	Revise Unit 5. Part 2. Parameters: call by reference	1,66	7
8	15	Computer Lab. Session 6b. T5. Functions Friday, 1 Novembe is public holiday		x	NO	Understand and complete all the proposed practical exercises	1,66	
9 *Oct, 28th*	**16**	**Unit 6. Advanced Data Types. Session 1. Arrays** **Introduction: structured vs. simple data types. Arrays: definition and use. Arrays as function parameters. Character strings**	x		NO	Problems :structures	1,66	7
9	17	Computer Lab. Session 7 T5. Arrays I		x	NO	Revise Lab Session and complete any unfinished exercises	1,66	
10 *Nov, 4th*	**18**	**Unit 6. Arrays: Exercises**	x				*1,66*	7
10	*19*	Computer Lab. Session 8. T6. Arrays II.		*x*	NO	Revise Lab Session and complete any unfinished exercises	*1,66*	
11 *Nov,11st*	**20**	**First Continuous Assessment Exam (20% of the final grade)**	x		YES	Revise Units 3, 4, 5, 6.	1,66	7
11	21	Computer Lab. Session 9. T6. Structures.		x	NO	Revise Lab Session and complete any unfinished exercises	1,66	
12 *Nov,18th*	**22**	**Unit 6. Advanced Data Types. Session 2. Structures** **Structures: definition and use. Arrays of structures. Structures as function parameters**	X			Reading of the corresponding chapters. Problems :search and sort algorithms	*1,66*	7
12	23	Computer Lab. Session 10. U6. Arrays of structures (I)		x	YES	Revise Lab Session and complete any unfinished exercises	1,66	

13 *Nov,25th*	24	**Unit 6. Structures. Exercises**	x		NO	Reading of the corresponding chapters.	1,66	7
13	25	Computer Lab. Session 11a. U6. Arrays of structures (II)		x	YES	Revise Lab Session and complete any unfinished exercises	1,66	
14 *Dec. 2nd*	**26**	**Unit 7. Search, Sort and Merge Algorithms.**			NO	Reading of the corresponding chapters. Problems :search and sort algorithms	1,66	7
14	27	Computer Lab. Session 11b. U6. Arrays of structures (II) Friday, 6 December is public holiday		x	NO		1,66	
15 *Dec, 9th*	**28**	**Unit 8. Advanced topics.** **External data storage: files and databases.** **Dynamic memory management** **Programs used in Engineering** Exam Exercises' **Monday, 9 December is public holiday**		x	NO	Reading of the corresponding chapters Exam Exercises'	1,66	7
	29	Computer Lab. Session 12. Search, Sort and Merge Algorithms: Exercises			NO	Revise Lab Session and complete any unfinished exercises	1,66	
16 Dec 16 th	**30**	**Second Continuous Assessment Exam. (20% of the final grade)**			YES	Revise Units 3, 4, 5, 6, 7		7
						Subtotal 1	**49.8**	**106**
						Total 1 *(Hours of class plus student homework hours between weeks 1-14)*		**155.8**

16 17 18		Assessment					4	20
						Subtotal 2	**4**	**20**
						Total 2 *(Hours of class plus student homework hours between weeks 15-18)*		24
TOTAL *(Total 1 + Total 2.)*								**178,8**