

COURSE: Programming. 2019 – 2020		Teachers: José Antonio Iglesias / Oscar Sipele	
DEGREE: Bachelor’s Degree in Energy Engineering		YEAR: 1	TERM: 1

WEEKLY PLANNING										
WEEK	SESSION	DAY	DESCRIPTION	GROUPS		2 Teachers Session	WEEKLY PROGRAMMING FOR STUDENT			
				LECTURES	COMPUTER LAB		DESCRIPTION	DELIVERIES / EXAMS	CLASS HOURS	HOMEWORK HOURS
1	1	5-6 Sept	Course Overview: <ul style="list-style-type: none"> • Presentation, programme, bibliography, tutorials, didactic materials, planning of the subject... • Summary of the UNIT 1 (Introduction to computer science and programming) and UNIT 2 (Software and Hardware). 	X		YES	<ul style="list-style-type: none"> • Reading Docent Guide • Reading Chapter 14 (Prieto et al.) • Reading Guide “How to study Unit 1 and 2”. 		1,66	1
2	2	10 Sept	UNIT 3. Basic elements of the C programming language (1/2). <ul style="list-style-type: none"> • General structure of a program • Variables and constants • Types of operators: arithmetic, relational, logic, assignment operators. • Operators, expressions and instructions 	X		NO	<ul style="list-style-type: none"> • Exercises about simple C programs (Bibliography) 	<i>kahoot</i>	1,66	7
	3	12-13 Sept	Computer Lab Session (Unit 3): <ul style="list-style-type: none"> • Programming Software (IDE) • Weekly Practical Exercises - WP3.1 		X	NO	<ul style="list-style-type: none"> • Understand and complete all the proposed practical exercises. 		1,66	

3	4	17 Sept	UNIT 3. Basic elements of the C programming language (2/2). <ul style="list-style-type: none"> • Operators, expressions and instructions • Input and output instructions. 	X		NO	<ul style="list-style-type: none"> • Reading of the corresponding chapters. • Exercises about input and output instructions 	<i>kahoot</i>	1,66	7
	5	19-20 Sept	Computer Lab Session (Unit 3): <ul style="list-style-type: none"> • Weekly Practical Exercises - WP3.2 		X		<ul style="list-style-type: none"> • Understand and complete all the proposed practical exercises. 	Selected Exercises Unit 3	1,66	
4	6	24 Sept	UNIT 4. Control structures (1/3). Selection structures: if-else, switch	X		NO	<ul style="list-style-type: none"> • Reading of the corresponding chapters. • Exercises about selection structures 	<i>kahoot</i>	1,66	7
	7	26-27 Sept	Computer Lab Session (Unit 4): <ul style="list-style-type: none"> • Weekly Practical Exercises – WP4.1 		X	NO	<ul style="list-style-type: none"> • Understand and complete all the proposed practical exercises. 		1,66	
5	8	1 Oct	UNIT 4. Control structures (2/3). <ul style="list-style-type: none"> • Repetition structures (loops): for 	X		NO	<ul style="list-style-type: none"> • Reading of the corresponding chapters. • Exercises about control structures 	<i>kahoot</i>	1,66	7
	9	3-4 Oct	Computer Lab Session (Unit 4): <ul style="list-style-type: none"> • Weekly Practical Exercises – WP4.2 		X	NO	<ul style="list-style-type: none"> • Understand and complete all the proposed practical exercises. 	Selected Exercises Unit 4	1,66	
6	10	8 Oct	UNIT 4. Control structures (3/3). <ul style="list-style-type: none"> • Repetition structures (loops): while, do-while 	X		NO	<ul style="list-style-type: none"> • Exercises about control structures 	<i>Kahoot</i>	1,66	7
	11	10-? Oct	Computer Lab Session (Unit 4): <ul style="list-style-type: none"> • Weekly Practical Exercises – WP4.4 		X	NO	<ul style="list-style-type: none"> • Understand and complete all the proposed practical exercises. 	Continuous Evaluation Exam 1	1,66	

7	12	15 Oct	UNIT 5. Subprograms (1/3) <ul style="list-style-type: none"> • Definition. • Modular programming. 	X		NO	<ul style="list-style-type: none"> • Reading of the corresponding chapters. • Exercises about subprograms. 	<i>kahoot</i>	1,66	7
	13	17-18 Oct	Computer Lab Session (Unit 5): <ul style="list-style-type: none"> • Modular programming. 		X	NO	<ul style="list-style-type: none"> • Understand and complete all the proposed practical exercises. 		1,66	
8	14	22 Oct	UNIT 5. Subprograms (2/3) <ul style="list-style-type: none"> • Definition. • Modular programming. 	X		NO	<ul style="list-style-type: none"> • Reading of the corresponding chapters. • Exercises about subprograms. 	<i>kahoot</i>	1,66	7
	15	24-25 Oct	Computer Lab Session (Unit 5): <ul style="list-style-type: none"> • <i>Final Project 1.1. (1/3)</i> 		X	YES	<ul style="list-style-type: none"> • Understand and complete all the proposed practical exercises. 	Selected Exercises Unit 5	1,66	
9	16	29 Oct	UNIT 5. Subprograms (3/3) <ul style="list-style-type: none"> • Input / Output arguments. 	X		NO	<ul style="list-style-type: none"> • Reading of the corresponding chapters. • Exercises about subprograms. 	<i>kahoot</i>	1,66	7
	17	31-? Oct	Computer Lab Session (Unit 5): <ul style="list-style-type: none"> • <i>Final Project 1.1. (1/3)</i> 		X	YES	<ul style="list-style-type: none"> • Understand and complete all the proposed practical exercises. 	Final Project 1.1		
10	18	5 Nov	UNIT 6. Structured data types (1/4) <ul style="list-style-type: none"> • Structured vs simple data types • Definition and use of arrays • Pointers and arrays / Character strings 	X		NO	<ul style="list-style-type: none"> • Reading of the corresponding chapters. • Exercises about arrays. 	<i>kahoot</i>	1,66	7
	19	7-8 Nov	Computer Lab Session (Unit 6): <ul style="list-style-type: none"> • Exercises about subprograms. 		X	NO	<ul style="list-style-type: none"> • Understand and complete all the proposed practical exercises. 		1,66	

11	20	12 Nov	UNIT 6. Structured data types (2/4) <ul style="list-style-type: none"> User defined data structures: records 	X		NO	<ul style="list-style-type: none"> Reading of the corresponding chapters. Exercises about arrays 	<i>kahoot</i>	1,66	7
	21	14-15 Nov	Computer Lab Session (Unit 6): <ul style="list-style-type: none"> Exercises about subprograms. 		X	NO	<ul style="list-style-type: none"> Understand and complete all the proposed practical exercises. 	Selected Exercises Unit 6	1,66	
12	22	19 Nov	UNIT 6. Structured data types (3/4) <ul style="list-style-type: none"> User defined data structures: records Arrays of records Exercises about data types. 	X		NO	<ul style="list-style-type: none"> Reading of the corresponding chapters. Exercises about arrays 	<i>Kahoot</i>	1,66	7
	23	21-22 Nov	Computer Lab Session (Unit 6): <ul style="list-style-type: none"> Exercises about subprograms. <i>Final Project 1.2. (2/3)</i> 		X	YES	<ul style="list-style-type: none"> Understand and complete all the proposed practical exercises. 	Continuous Evaluation Exam 2	1,66	
13	24	26 Nov	UNIT 6. Structured data types (4/4) <ul style="list-style-type: none"> User defined data structures: records Arrays of records Exercises about data types. 	X		NO	<ul style="list-style-type: none"> Reading of the corresponding chapters. Exercises about arrays. 	<i>Kahoot</i>	1,66	7
	25	28-29 Nov	Computer Lab Session (Unit 6): <ul style="list-style-type: none"> <i>Final Project 1.2. (2/3)</i> 		X	YES	<ul style="list-style-type: none"> Understand and complete all the proposed practical exercises. 	Final Project 1.2	1,66	
14	26	3 Dec	UNIT 7. Search, sort and merge algorithms <ul style="list-style-type: none"> Search algorithms Sort algorithms 	X		NO	<ul style="list-style-type: none"> Reading of the corresponding chapters in the proposed literature. Exercises about arrays (Bibliography) 	<i>kahoot</i>	1,66	7
	27	5-? Dec	Computer Lab Session (Unit 7): <ul style="list-style-type: none"> Exercises about searching and sorting. <i>Final Project 1.3 (3/3)</i> 		X	NO	<ul style="list-style-type: none"> Understand and complete all the proposed practical exercises. 	Selected Exercises Unit 7	1,66	

15	28	10 Dec	Exercises: exams of <i>previous years & Final Project</i>	X		NO	<ul style="list-style-type: none"> Understand and complete all the proposed practical exercises. 	Final Project 1.3	1,66	7
	29	12-13 Dec	Exercises: exams of <i>previous years & Final Project</i>		X	NO	<ul style="list-style-type: none"> Understand and complete all the proposed practical exercises. 	Computer Lab Exam	1,66	
Subtotal 1									48,1	99
Class Hours + Homework hours. Weeks 1 -15									147,1	