

COURSE: Programming		
DEGREE: Engineering Physics	COURSE: 1	SEMESTER: 2

PLANIFICACIÓN SEMANAL DE LA ASIGNATURA								
S E M E S T R E	S E S I Ó N	DESCRIPCIÓN DEL CONTENIDO DE LA SESIÓN	TIPO DE DOCENCIA (marcar X)		ESPACIO DISTINTO DEL AULA (aula informática, audiovisual, etc.)	TRABAJO SEMANAL DEL ALUMNO		
			A G R E G A D O	R E U C I D O		DESCRIPCIÓN	HORAS PRESENCIALES (1,66=50+50 min)	HORAS TRABAJO (Max. Estim. 6,5h)
1	1	Course introduction. Basic concepts (I).	X			Course introduction and basic concepts in programming.	1.66	3.5
	2	Lab 1: Basic concepts (II).		X	Lab.	Basic concepts in programming.	1.66	
2	3	Basic elements of programming. Concept and application in the Python programming language.	X			Identifiers, variables, constants and datatypes. Syntax and semantics in Python. 1-minute quizz.	1.66	3.5
	4	Lab 2: Application of basic elements of programming in Python.		X	Lab.	The Python programming language. Use of identifiers, variables, constants and data types in Python.	1.66	
3	5	Basic elements of programming. Concept and application in the Python programming language.	X			Operators, expressions and statements. Syntax and semantics in Python. 1-minute quizz.	1.66	6.5
	6	Lab 3: Application of basic elementos of programming in Python.		X	Lab.	Use of operators, expressions and statements in Python. Introduction to the final project.	1.66	

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			A G R E G A D O	R E D U C I D O		DESCRIPCIÓN	HORAS PRESENCIALES (1,66=50+50 min)	HORAS TRABAJO (Max. Estim. 6,5h)
4	7	Control flow. Conditional sentences.	X			Conditional statements. Concept, examples, syntax and semantics in Python. Exercises. 1-minute quizz.	1.66	6.5
	8	Lab 4: Control flow. Conditional sentences.		X	Lab.	Use of conditional statements in Python. Debugging.	1.66	
5	9	Control flow. Loops.	X			Loops, concept, examples, syntax and semantics in Python. 1-minute quizz.	1.66	6.5
	10	Lab 5: Control flow. Loops.		X	Lab.	Use of loops in C.	1.66	
6	11	Data structures and user-defined datatypes	X			Definition and design principles. Concept, syntax and semantics of Strings in Python. 1-minute quizz.	1.66	6.5
	12	Lab 6: Strings in Python.		X	Lab.	Use of Strings in Python.	1.66	
7	13	Data structures and user-defined datatypes. Arrays and pointers.	X			Concept, examples, syntax and semantics of arrays in Python. 1-minute quizz.	1.66	5.5
	14	Lab 7: Arrays in Python (I).		X	Lab.	Use of arrays in Python.	1.66	
8	15	Mid-term exam.	X				1.66	5.5
	16	Lab 7: Arrays in Python (II).		X	Lab.	Use of arrays in Python. First delivery of the final project.	1.66	
9	17	Data structures and user-defined datatypes. Structs.	X			Concept, examples, syntax and semantics in Python. 1-minute quizz.	1.66	6.5
	18	Lab 8: User-defined datatypes in Python.		X	Lab.	Use of user-defined datatypes in Python.	1.66	
10	19	Subprograms: procedures and functions.	X			Definition and design principles. Concept, syntax and semantics of functions in Python. 1-minute quizz.	1.66	6.5
	20	Lab 9: Functions and procedures in Python.		X	Lab.	Use of functions in Python.	1.66	
11	21	Subprograms: procedures and functions.	X			Exercises of functions in C.	1.66	6.5
	22	Lab 10: Functions and procedures in Python.		X	Lab.	Use of functions in Python.	1.66	

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12	23	Basic algorithms.	X			Definition, concept and application of searching and sorting algorithms. 1-minute quizz.	1.66	6.5
	24	Lab 11: Searching and sorting.		X	Lab.	Use of searching and sorting algorithms in Python.	1.66	
13	25	Resource management.	X			Memory management, concept, syntax and semantics in Python. 1-minute quizz.	1.66	5.5
	26	Lab 12: Resource management: memory management in Python.		X	Lab.	Use of memory in Python. Introduction to the C Programming language with focus on pointers and memory management.	1.66	
14	27	Input/Output system.	X			File management. Concept, syntax and semantics in Python. 1-minute quizz.	1.66	5.5
	28	Lab 13: File management in Python.		X	Lab.	Use of files in Python. Introduction to the C Programming language with focus on pointers and memory management.	1.66	
	29	Tutoring session.	X				1.66	3.25
Subtotal 1							48	84
Total 1 (Horas presenciales y de trabajo del alumno)							132	
15		Recuperaciones, tutorías, entrega de trabajos, etc					3.6	-
16	18	Preparación de evaluación y examen					4	10
17								
Subtotal 2							8	10
Total 2 (Horas presenciales y de trabajo del alumno)							18	
TOTAL (Máximo 160 horas)							150	

