

COURSE: DATA STRUCTURES AND ALGORITHMS		
DEGREE: INGENIERÍA INFORMÁTICA	YEAR: 1	TERM: 2
DEGREE: DOBLE GRADO INGENIERÍA INFORMÁTICA Y ADMINISTRACIÓN DE EMPRESAS	YEAR: 2	TERM: 2

WEEKLY PLANNING									
WEEK	SESSION	DESCRIPTION	TEACHING (mark X)			SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	WEEKLY PROGRAMMING FOR STUDENT		
			L E C T U R E S	S E M I N A R S	o n l i n e t e a c h e r		DESCRIPTION	CLASS HOURS (1,66=50+50 min)	HOMEWORK HOURS (Max. Estim. 6,5h)
1	1	Presentation of the course Lesson 1: Introduction Abstract Data Types (ADT).	x		1	online		1,66	
	2	Problems about simple TADs. Unitary Tests (unittests)		x	1	online	Problems about simple ADTs. Unitary Tests (unittests)	1,66	6,5
2	3	Lesson 2: Linear Data Structures: Stacks and Queues. Singly Linked Lists	x		1	online		1,66	
	4	Problems about stacks, queues and singly linked lists		x	1	online	Problems about stacks, queues and singly linked lists. Study linear data structures	1,66	6,5
3	5	Lesson 2: Linear Data Structures: Doubly Linked Lists	x		1	online		1,66	
	6	Problems about singly linked lists. Presentation of lab case (all phases). Presentation of Phase 1 (lab case)		x	1	online	Study linear data structures. Problems about doubly linked lists. Work on Lab case Phase 1.	1,66	6,5

4	7	Lesson 3: Analysis of Algorithms. Empirical Analysis. Theoretical Analysis: Big-O functions. Best and Worst cases	x		1	online	Study Analysis of Algorithms. Problems about Analysis of Algorithms. Work on Lab Case Phase 1. Análisis de Algoritmos.	1,66	6,5
	8	Problems about analysis of algorithms. Work on Lab Case Phase 1.		x	1	online		1,66	
5	9	Lesson 4. Recursion I	x		1	online	Study Analysis of Algorithms. Problems about Analysis of Algorithms. Work on Lab Case Phase 1. Study for the first mid-term exam	1,66	6,5
	10	Problems about recursion. Work on Lab Case Phase 1.		x	1	online		1,66	
6	11	FIRST MID-TERM EXAM	x		2	online	Work on Lab Case Phase 1. Study for the first mid-term exam	1,66	6,5
	12	Work on Lab Case Phase 1.		x	1	online		1,66	
7	13	Lesson 5: Trees: Binary Trees. Traversals.	x		1	online	Study about trees. Problems about trees. Work on Lab Case Phases 1 and 2.	1,66	6,5
	14	Problems about recursion. Work on Lab Case Phase 1. Presentation of Lab Case Phase 2		x	1	online		1,66	
8	15	Lesson 5: Trees: Binary Search Trees (BST).	x		1	online	Study about BST. Problems about BST. Work on Lab Case Phases 1 and 2.	1,66	6,5
	16	Problems about BST. Work on Lab Case Phases 1 and 2.		x	1	online		1,66	
9	17	Lesson 5: Trees: Balance Trees.	x		1	online	Study how to balance a BST. Work on phrases 1 and 2. Work for the oral exam of the phase 1.	1,66	6,5
	18	ORAL EXAM OF THE LAB CASE PHASE 1		x	2	face to face		1,66	
10	19	Lesson 6: Graphs. Implementations	x		1	online	Study about graphs and their implementations. Work on phases 2 and 3.	1,66	6,5
	20	Problems about how to balance a BST. Presentation of Lab Case Phase 3.		x	1	face to face		1,66	
11	21	Lesson 6: Graphs. Traversals and shortest path algorithm	x		1	online	Study traversal and shortest path algorithms for graphs. Work on phases 2 and 3. Study for the second mid-term exam.	1,66	6,5
	22	Problems about graphs. Work on Lab Case Phases 2 and 3.		x	1	online		1,66	
12	23	SECOND MID-TERM EXAM	x		2	online	Study about graphs. Work on on phases 2 and 3.	1,66	6,5
	24	Problems about graphs. Work on Lab Case Phases 2 and 3.		x	1	online		1,66	
13	25	Lesson 7. Recursion II. Divide and Conquer.	x		1	online	Study about divide and conquer. Work on phases 2 and 3.	1,66	6,5
	26	Work on on phases 2 and 3.		x	1	online		1,66	
	27	ORAL EXAM OF THE LAB CASE PHASES 2 AND 3	x		2	face to face	1,66		

14	28	ORAL EXAM OF THE LAB CASE PHASES 2 AND 3		x	1	face to face	Study for the oral exam of the lab case.	1,66	6,5
							Subtotal 1	46	91
		Total 1 (Hours of class plus student homework)						137	
15		Tutorials, handing in, etc						2,0	-
16		Assessment							
17									
18								4	14
							Subtotal 2	6	14
		Total 2 (Hours of class plus student homework)						20	
TOTAL (Maximun 160 horas)								157	