uc3m | Universidad Carlos III de Madrid

Vicerrectorado de Estudios Apoyo a la docencia y gestión del grado

COLIBSE: DA	TA CTDLICT	IDEC VIID	ALGORITHMS
COURSE: DF	IIA SIRUCI	UKES AND	ALGURI I MIVIS

DEGREE: CIENCIA E INGENIERÍA DE DATOS YEAR: 1 TERM: 2

	WEEKLY PLANNING						
S			TEACHING (mark X)		SPECIAL ROOM	WEEKLY PROGRAMMING FOR STUDENT	
W S E S E I K O N	s s I O	DESCRIPTION		E M I N A R S	FOR SESSION (Computer class room, audio- visual class room)	DESCRIPTION	CLASS HOURS (1,66=50+50 min)
1	1	Presentation of the course. Problems about programming.	х		Computer	Problems about programming	1,66
_	2	Unit 1. Abstract Data Types. Unit 2. Linear ADT, Stacks, Queues.	х			Study about basic ADTs, stacks and queues	1,66
2	3	Problems on stacks and queues (balanced parenthesis and josephus)	Х		Computer	Study about stacks and queues	1,66
	4	Unit 2.2 - Singly Linked List	х			Study about singly linked lists	1,66
3	5	Implementation of singly linked list. Problems on singly linked lists	х		Computer	Study about singly linked lists	1,66
	6	Unit 2.3 - Doubly Linked List	х			Study about doubly linked lists	1,66
4	7	Implementation of doubly linked list. Problems on doubly linked lists Unit 3. Analysis of Algorithms			Computer	Study about doubly linked lists	1,66
_	8					Study about analysis of algorithms	1,66
5	9	Problems on analysis of algorithms	х		Computer	Study about analysis of algorithms	1,66
	10	Unit 4. Recursion	х			Study about recursion.	1,66
6	6 11	Problems on recursion	х		Computer	Study for the midterm exam (unit 1-4)	1,66
	12	Midterm exam: unit 1, unit 2, unit 3, unit 4.	х			Study for the midterm exam (unit 1-4)	1,66
7	13	Exam resolution. Presentation of the lab case.	х		Computer	Work on lab case (phase 1 using linear ADTs)	1,66
,	14	Unit 5. Trees. Definitions. Tree traversals. Binary Trees.	х			Study on trees.	1,66
8	15	Work on lab case (phase 1 using linear ADTs)	х		Computer	Study on trees. Work on lab case.	1,66
	16	Unit 5.2. Binary Search Trees (BSTs)	х			Study on binary search trees.	1,66
a	17	Problems on BSTs. Work on lab case (phase 2)	Х		Computer	Study on BST. Work on lab case	1,66

WEEKLY PLANNING							
W S S S S S S S S S S S S S S S S S S S	S		TEACHING (mark X)		SPECIAL ROOM	WEEKLY PROGRAMMING FOR STUDENT	
	E S S I O N		E C T U R E S	E M I N A R	FOR SESSION (Computer class room, audio- visual class room)	DESCRIPTION	CLASS HOURS (1,66=50+50 min)
	18	Unit 5.3. How to balance BSTs	х			Study on balancing strategies for BST.	1,66
10	19	Problems on balancing BSTs. Work on lab case (phase 2)	х		Computer	Work on lab case.	1,66
	20	Unit 6. Graphs. Implementations. Traversals.	х			Study on Graphs.	1,66
11	21	Implementation of graphs. Work on lab case (phase 3)	х		Computer	Study on lab case. Work on lab case (phase 3)	1,66
	22	Unit 6.2. Shortest path (Dijkstra's Algorithm)	х			Study on Graphs.	1,66
12	23	Work on lab case (phase 3).	х		Computer	Study on lab case. Work on lab case (phase 3)	1,66
	24	Unit 7- Divide and conquer	х			Study on divide and conquer. Work on lab case	1,66
13	25	Problems on divide and conquer. Work on lab case	х		Computer	Study on divide and conquer. Work on lab case	1,66
	26	Problems of previous exams / work on lab case	х			Study for the final exam. Work on lab case	1,66
14	27	Lab case exam	х		Computer	Study for the final exam. Work on lab case	1,66
	28	Problems of previous exams	х			Study for the final exam.	1,66
	29	Additional session					1,66
	Subtotal 1				48		
	Total 1 (Hours of class plus student homework)						14
15		Tutorials, handing in, etc		l	1		3,6
16 17 18		Assessment					4
	Subtotal 2						8
	Total 2 (Hours of class plus student homework)					1	

TOTAL (<u>Maximun 160 horas</u>)

HOMEWORK HOURS

(Max. Estim. 6,5h)

6,5

6,5

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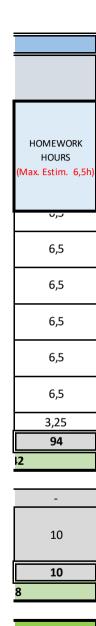
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