COURSE: Systems Programming		
DEGREE: Telematics Engineering / Telecommunication Technologies / Communication System Engineering / Audiovisual System Engineering	YEAR: 1	TERM: 2

La asignatura tiene 29 sesiones que se distribuyen a lo largo de 14 semanas. Los laboratorios pueden situarse en cualquiera de ellas.
Semanalmente el alumnos tendrá dos sesiones, excepto en un caso que serán tres

WEEKLY PLANNING								
WEEK	SESSION	DESCRIPTION	GROUPS (mark X)		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	Indicate YES/NO If the session needs 2 teachers	WEEKLY PROGRAMMING FOR STUDENT	
			LECTURES	SEMINARS			DESCRIPTION	CLASS HOURS	HOME WORK HOURS (Max. 7h week)
1	1	**Introduction and recap** Course presentation (syllabus, methodology, evaluation, etc.). Installation and configuration of the programming environment Recap of basic programming concepts	X		Lecture hall	No	Study of the concepts covered in class, Review and develop reference material related with this session Solving some questions or exercises related with this session Develop personal work planning Group registration	1,66	6
1	2	**Recap exercises** Using the Integrated Development Environment Using the debugger Recap exercises		X	Computer lab	No	Recap exercises Installing the development environment for personal computers Practice using the debugger.	1,66	

2	3	**Object orientation and inheritance** Definitions: Classes and Objects Composition & Inheritance	X		Lecture hall	No	Study of the concepts covered in class, Review and develop reference material related with this session Solving some questions or exercises related with this session	1,66	6
2	4	**Exercises about Object orientation and Inheritance**		X	Computer lab	No	Exercises about Object orientation and Inheritance	1,66	
3	5	**Object orientation and inheritance** Overwritting and overloading Shadowing Modifiers Constructors	X		Lecture hall	No	Study of the concepts covered in class, Review and develop reference material related with this Session Solving some questions or exercises related with this session	1,66	6
3	6	**Exercises about Object orientation and inheritance**		X	Computer lab	No	Exercises about Object orientation and Inheritance	1,66	
4	7	**Object orientation and Interfaces** Abstract clases Interfaces Polymorphims	X		Lecture hall	No	Study of the concepts covered in class, Review and develop reference material related with this session Solving some questions or exercises related with this session	1,66	6
4	8	**Exercises about Object orientation and Interfaces**		X	Computer lab	Yes	Exercises about object orientation and interfaces	1,66	
5	9	**Recursion** Definition Types Implementation and execution examples	X		Lecture hall	No	Full review didactical unit Object Orientation Study of the concepts covered in class, Review and develop reference material related with this session Solving some questions or exercises related with this session	1,66	6
5	10	**Exercises about Recursion**		X	Computer lab	No	Exercises about Recursion	1,66	
6	11	**Testing**	X		Lecture hall	No	Study of the concepts covered in class, Review and develop reference material related with this session Solving some questions or exercises related with this session	1,66	6
6	12	**Exercises about testing**		X	Computer lab	No	Exercises about testing	1,66	
7	13	**Linked Lists and Double LinkedLists** Definition Types Implementation Examples Basic operations and algorithms (insert, delete, search)	X		Lecture hall	No	Study of the concepts covered in class, Review and develop reference material related with this session	1,66	6

							Solving some questions or exercises related with this session	
7	14	**Exercises about LinkedLists and Double LinkedLists**		X	Computer lab	No	Exercises about LinkedLists and Double LinkedLists	1,66	
8	15	**Mid-term Assessment I** (Theory and problems)	X		Lecture hall	Yes	Complete review of all didactical units studied to date: -Study of the concepts covered in previous classes, - Review and develop reference material related with previous sessions -Solving some questions or exercises related with previous sessions	1,66	7
8	16	**Mid-term Assessment I** (Practice)		X	Computer lab	No	Complete review of all didactical units studied to date: -Study of the concepts covered in previous classes, - Review and develop reference material related with previous sessions -Solving some questions or exercises related with previous sessions	1,66	
9	17	**Stacks and Queues** Definition Types Implementation Examples Basic operations and algorithms (insert, delete)	X		Lecture hall	No	Full review didactical unit: LinkedLists, Stacks and Queues Study of the concepts covered in class, Review and develop reference material related with this session Solving some questions or exercises related with this session	1,66	6
9	18	**Exercises about stacks and queues**		X	Computer lab	No	Exercises about Stacks and Queues	1,66	
10	19	**Trees I** Definition Properties Examples of use and implementation Algorithms (preorder, postorder, inorder) Binary Trees	X		Lecture hall	No	Full review didactical unit: Recursion Study of the concepts covered in class, Review and develop reference material related with this session Solving some questions or exercises related with this session	1,66	6
10	20	**Exercises about Trees**		X	Computer lab	No	Exercises about Trees	1,66	
11	21	**Trees II** Binary Search Trees Examples of use and implementation Basic operations (insert, delete, search)	X		Lecture hall	No	Study of the concepts covered in class, Review and develop reference material related with this session	1,66	6

							Solving some questions or exercises related with this session		
11	22	**Exercises about Binary Search Trees**		X	Computer lab	No	Exercises about Trees	1,66	
12	23	**Trees III** Heaps Examples of use and implementation Basic operations (insert, delete, search)	X		Lecture hall	No	Complete review of all didactical units since previous midterm: -Study of the concepts covered in previous classes, - Review and develop reference material related with previous sessions -Solving some questions or exercises related with previous sessions	1,66	6
12	24	**Exercises about Heaps**		X	Computer lab	No	Exercises about Heaps	1,66	
13	25	**Searching and sorting algorithms** Examples of use and implementation	X		Lecture hall	No	Study of the concepts covered in class, Review and develop reference material related with this session Solving some questions or exercises related with this session	1,66	6
13	26	**Exercises about searching and sorting algorithms**		X	Computer lab	Yes	Exercises about searching and sorting algorithms	1,66	
14	27	**Mid-term Assessment II** (Theory and Problems)	X		Lecture hall	Yes	Solving some questions or exercises related with previous sessions	1,66	7
14	28	**Mid-term Assessment II** (Practice)		X	Computer lab	No	Solving some questions or exercises related with previous sessions	1,66	
7	29	**Recap and exam preparation**		X	Computer lab	No	Solving some questions or exercises related with previous sessions	1,66	1
							Subtotal 1	48,33	
		Total 1 *(Hours of class plus student homework hours between weeks 1-14)*							

15		Tutorials, handing in, etc							7
16									
17		Assessment						3	14
18									
							Subtotal 2	3	21
		Total 2 *(Hours of class plus student homework hours between weeks 15-18)*							

TOTAL *(Total 1 + Total 2. Maximum 180 hours)*	