uc3m | Universidad Carlos III de Madrid

COURSE: Programming		
DEGREE: Bachelor's Degree in Informatics Engineering	YEAR: 1st	TERM: 1st

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	HOMEWORK HOURS (Max. 7h week)
1	1	**1. Introduction**	X				Aula Global tests: computer architecture Weekly assignments (individual): algorithms	1.66	4
2	2	**3. Introduction to Java** a. The JVM b. Basic data types c. Programs d. Variables and constants	X				Aula Global tests: primitive data types. Weekly assignments (individual): flow diagrams	1.66	5
	3	**2. Flow diagrams** Correcting exercises: algorithms Exercises: flow diagrams		X	Computer room			1.66	
3	4	**3. Introduction to Java** e. Operators f. Casting g. Input and random numbers h. Comments i. Debugging: errors	X				Aula Global tests: Variables and arithmetic operators Weekly assignments (in pairs): variables and arithmetic operators	1.66	5
	5	Correcting exercises: flow diagrams Introduction of the development environment Exercises: variables and arithmetic operators		X	Computer room			1.66	
4	6	**4. Control flow** a. Conditionals	X				Aula Global tests: casting and operators.	1.66	6

	7	Correcting exercises: variables and arithmetic operators. Exercises: operators, casting, keyboard and decision making		X	Computer room		Weekly assignments (in pairs): operators, casting, keyboard and decision making	1.66	
5	8	**4. Control flow** b. Scope and blocks c. Loops d. Break and continue	X				Aula Global tests: decision making. Weekly assignments (in pairs): looping statements.	1.66	6
	9	Correcting exercises: operators and casting. Exercises: looping statements.		X	Computer room			1.66	
6	10	**5. Simple data structures** a. Arrays and matrixes	X				Aula Global tests: Loops. Weekly assignments (in pairs): arrays and matrixes.	1.66	6
	11	Correcting exercises: looping statements. Debugging. Exercises: arrays and matrixes.		X	Computer room			1.66	
7	12	**5. Simple data structures** b. Records c. Objects and constructors	X				Aula Global tests: arrays Mid-term exam preparation	1.66	7
	13	Correcting exercises: arrays and matrixes.		X	Computer room			1.66	
8	14	**Mid-term exam**	X				Aula Global tests: objects. Weekly assignments (in pairs): objects (I).	1.66	7
	15	Exercises: objects (I).		X	Computer room			1.66	
9	16	**6. Methods and functions** a. Decomposition b. Code reuse	X				Weekly assignments (in pairs): objects (II) Work on final project	1.66	7
	17	**Introduction to the final project** Correcting exercises: objects (I). Exercises: objects (II)		X	Computer room			1.66	
10	18	**6. Methods and functions** c. Implementation hiding d. Encapsulation: information hiding	X				Weekly assignments (in pairs): methods (I). Work on final project	1.66	7
	19	Working with the final project code Correcting exercises: objects (II) Exercises: methods (I)		X	Computer room			1.66	
11	20	**6. Methods and functions** e. Encapsulation: modularity f. Overloaded methods g. Pass by value and pass by reference	X				Final project design Weekly assignments (in pairs): Methods (II)	1.66	7
	21	Correcting exercises: methods (I). Exercises: methods (II)		X	Computer room	YES		1.66	

12	22	**6. Methods and functions** h. Functions (static methods) i. Introduction to recursion **8. Introduction to Object Oriented Programming** a. Introduction to inheritance	X				Aula Global tests: objects and methods Weekly assignments (in pairs): Methods (III). Work on final project	1.66	7
	23	Correcting exercises: methods (II) Exercises: methods (III)		X	Computer room			1.66	
13	24	**8. Introduction to Object Oriented Programming** b. Abstract classes c. Introduction to polymorphism	X				Aula Global tests: static methods Weekly assignments (in pairs): OOP and String methods. Work on final project	1.66	7
	25	Correcting exercises: methods (III) Exercises: OOP and String methods		X	Computer room			1.66	
14	26	**9. Algorithms**	X				Work on final project	1.66	7
	27	Correcting exercises: OOP and String methods		X	Computer room	YES		1.66	
15	28	Work on final project		X	Computer room	YES	Work on final project	1.66	7
	29	Work on final project		X	Computer room	YES		1.66	
							Subtotal1	**48**	**95**
							Total 1 *(Hours of class plus student homework hours between weeks 1-14)*	143	

15		Tutorials, handing in, etc							
16		Assessment						3	14
17									
18									
							Subtotal 2	**3**	**14**
							Total 2 *(Hours of class plus student homework hours between weeks 15-18)*	17	
TOTAL *(Total 1 + Total 2. Maximum 160 hours)*								**160**	