Universidad Carlos III de Madrid
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COURSE: Simulation of dynamical systems		
DEGREE: Industrial electronics and automation engineering	YEAR: 4	TERM: 1

WEEKLY PLANNING								
			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	
WEEK	SESSION	DESCRIPTION	LECTURES	SEMINARS			DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)
1	1	Introduction to modeling and simulation	X		Computer class room with Matlab	No		1,6	
1	2	Definition and basic concepts	X		Computer class room with Matlab	No		1,6	3
2	3	Basic types of models of dynamical systems	X		Computer class room with Matlab	No		1,6	3

2	4	Modeling and simulation languages review	X		Computer class room with Matlab	No		1,6	
3	5	Introduction to block oriented languages for simulation		X	Computer class room with Matlab	No	Programming exercises	1,6	
3	6	Vectors and matrix handling		X	Computer class room with Matlab	No	Programming exercises	1,6	4
4	7	Exercises on vector and matrices definition		X	Computer class room with Matlab	No	Programming exercises	1,6	
4	8	Programming and flow control (I)		X	Computer class room with Matlab	No	Programming exercises	1,6	4
5	9	Programming and flow control (II)		X	Computer class room with Matlab	No	Programming exercises	1,6	
5	10	Evaluation test (I)		X	Computer class room with Matlab	No	Test exercises	1,6	5
6	11	Functions and libraries (I)		X	Computer class room with Matlab	No	Programming exercises	1,6	
6	12	Functions and libraries (II)		X	Computer class room with Matlab	No	Programming exercises	1,6	4
7	13	Evaluation test (II)		X	Computer class	No	Test exercises	1,6	5

					room with Matlab				
7	14	Libraries for diferential ecuations solving (I)		X	Computer class room with Matlab	No	Programming exercises	1,6	
8	15	Libraries for diferential ecuations solving (II)		X	Computer class room with Matlab	No	Programming exercises	1,6	
8	16	Evaluation test (III)		X	Computer class room with Matlab	No	Test exercises	1,6	6
9	17	Graphics (I)		X	Computer class room with Matlab	No	Programming exercises	1,6	
9	18	Graphics (II)		X	Computer class room with Matlab	No	Programming exercises	1,6	6
10	19	Graphics (III)		X	Computer class room with Matlab	No	Programming exercises	1,6	
10	20	Case study implementation (I)		X	Computer class room with Matlab	No	Model development	1,6	6
11	21	Case study implementation (II)		X	Computer class room with Matlab	No	Model development	1,6	
11	22	Case study implementation (III)		X	Computer class room with Matlab	No	Model implementation	1,6	7

12	23	Case study implementation (IV)		X	Computer class room with Matlab	No	Model implementation		1,6	
12	24	Case study implementation (V)		X	Computer class room with Matlab	No	Model implementation		1,6	7
13	25	Evaluation test (IV)		X	Computer class room with Matlab	No	Test exercises		1,6	
13	26	Simulation Project implementation (I)		X	Computer class room with Matlab	No	Personal work for evaluation		1,6	7
14	27	Simulation Project implementation (II)		X	Computer class room with Matlab	No	Personal work for evaluation		1,6	7
14	28	Simulation Project implementation (III)		X	Computer class room with Matlab	No	Personal work for evaluation		1,6	
	29	Simulation Project implementation (IV)		X	Computer class room with Matlab	No	Personal work for evaluation	7	1,6	
		Subtotal 1							**48,33**	**81**
		Total 1 *(Hours of class plus student homework hours between weeks 1-14)*								

15		Tutorials, handing in, etc						10
16								
17		Assessment						3
18								21
		Subtotal 2					**13**	**21**

Total 2 *(Hours of class plus student homework hours between weeks 15-18)*	34

TOTAL *(Total 1 + Total 2. Maximum 180 hours)*	**163 ,33**