

COURSE: Simulation of dynamical systems

DEGREE: Industrial technologies

YEAR: 4

TERM: 1

	WEEKLY PLANNING									
WEEK	SESSION	DESCRIPTION			SPECIAL ROOM FOR SESSION (Computer	Indicate YES/NO If the session	WEEKLY PROGRAMMING FOR STUDENT			
~	N		LECTURES	SEMINARS	class room, audio-visual class room)	needs 2 teachers	DESCRIPTION	CLASS HOURS	HOMEWOF 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	х		Computer class room with Matlab	No		1,6	3	
2	3	Basic types of models of dynamical systems	Х		Computer class room with Matlab	No		1,6	3	

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					Computer				
2	4				class			1,6	
-	•				room with			1,0	
		Modeling and simulation languages review	Х		Matlab	No			
					Computer				
3	5				class			1,6	
	5				room with			1,0	
		Introduction to block oriented languages for simulation		Х	Matlab	No	Programming exercises		
					Computer				
3	6				class			1,6	
					room with			1,0	
		Vectors and matrix handling		Χ	Matlab	No	Programming exercises		4
					Computer				
4	7				class			1,6	
'					room with			1,0	
		Exercises on vector and matrices definition		Χ	Matlab	No	Programming exercises		
					Computer				
4	8				class			1,6	
-					room with				
		Programming and flow control (I)		Х	Matlab	No	Programming exercises		4
					Computer				
5	9				class			1,6	
		- 16 . 160			room with			,-	
		Programming and flow control (II)		Х	Matlab	No	Programming exercises		
					Computer				
5	10				class			1,6	
					room with			,-	_
		Evaluation test (I)		Х	Matlab	No	Test exercises		5
					Computer				
6	11				class			1,6	
		- · · · · · · · · · · · · · · · · · · ·			room with			,	
		Functions and libraries (I)		Х	Matlab	No	Programming exercises		
					Computer				
6	12				class			1,6	
		From this are and libraries (III)			room with	NI-	Due and marked a constant		
		Functions and libraries (II)		Х	Matlab	No	Programming exercises		4
7	13	5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			Computer			1,6	_
		Evaluation test (II)		X	class	No	Test exercises		5

Matab   Computer   Class   Computer   Computer   Class   Computer   Computer   Class   Computer		1			1		T	1	
To the Libraries for differential ecuations solving (i)    Solution   Computer class room with Matlab   No Programming exercises					room with				
Computer class room with Libraries for differential ecuations solving (I)   X   Matlab No Programming exercises   1,6									
14   Libraries for diferential ecuations solving (I)					1 -				
Libraries for differential ecuations solving (I)  8	7	14						1,6	
Society   Computer class   Computer   Computer class									
Solution			Libraries for diferential ecuations solving (I)	X		No	Programming exercises		
Society   Computer class   Computer   Computer class					1 -				
Libraries for diferential ecuations solving (II)    X	8	15						1,6	
Solution   Computer class room with No Test exercises   1,6   Computer class room with No Test exercises   1,6   Computer class room with No Programming exercises   1,6   Computer class room with No Model development   1,6   Compu									
Section   Case			Libraries for diferential ecuations solving (II)	X		No	Programming exercises		
Featuration test (III)  Evaluation test (III)  X Matlab  No Test exercises  6  Computer class room with Matlab No Programming exercises  1,6  Graphics (I)  X Matlab No Programming exercises  1,6  Computer class room with Matlab No Programming exercises  1,6  Computer class room with Matlab No Programming exercises  1,6  Computer class room with Matlab No Programming exercises  1,6  Computer class room with Matlab No Programming exercises  1,6  Computer class room with Matlab No Programming exercises  1,6  Computer class room with Matlab No Model development  1,6  Case study implementation (II)  X Matlab No Model development  1,6  Computer class room with No Model development					-				
Evaluation test (III)    Secondary   Food with   Food	8	16						1.6	
9 17 Graphics (I) X Matlab No Programming exercises  Computer class room with Matlab No Programming exercises  1,6 Computer class room with No Programming exercises  1,6 Case study implementation (I) X Matlab No Model development  Computer class room with No Model development  Computer class room with No Model development  Computer class room with No Model development  Case study implementation (II)  X Matlab No Model development  Computer class room with No Model development  Computer class room with No Model development								_,,	
9 17 Graphics (I) X Matlab No Programming exercises  1,6 Computer class room with No Programming exercises  1,6 Computer class room with No Programming exercises  1,6 Computer class room with No Programming exercises  10 19 Graphics (III) X Matlab No Programming exercises  1,6 Computer class room with No Programming exercises  1,6 Computer class room with No Programming exercises  1,6 Computer class room with No Model development  1 21 Case study implementation (II) X Matlab No Model development  1,6 Computer class room with No Model development			Evaluation test (III)	X		No	Test exercises		6
9 17 Graphics (I) X Matlab No Programming exercises  Computer class room with No Programming exercises  1,6 Graphics (III) X Matlab No Programming exercises  6 Computer class room with No Programming exercises  1,6 Computer class room with No Programming exercises  1,6 Computer class room with No Programming exercises  1,6 Computer class room with No Model development  6 Case study implementation (II) X Matlab No Model development  Case study implementation (III) X Matlab No Model development  Case study implementation (III)  X Matlab No Model development  Computer class room with No Model development  Case study implementation (III)					1 -				
Graphics (I)  In the second se	9	17						1.6	
Graphics (II)  Solution  Graphics (III)  X Matlab No Programming exercises  Computer class room with No Programming exercises  1,6  Computer class room with No Programming exercises  1,6  Computer class room with No Programming exercises  1,6  Computer class room with No Model development  Case study implementation (I)  X Matlab No Model development  Case study implementation (II)  X Matlab No Model development  Computer class room with No Model development  1,6  1,6  1,6  1,6  1,6  1,6  1,6  1,		-′						2,0	
9 18 Graphics (II)  X Mallab No Programming exercises  1,6  Computer class room with No Programming exercises  1,6  Graphics (III)  X Matlab No Programming exercises  1,6  Computer class room with No Programming exercises  1,6  Computer class room with No Model development  6  Computer class room with No Model development  Case study implementation (II)  X Matlab No Model development  Case study implementation (III)  X Matlab No Model development  Computer class room with No Model development  Computer class room with No Model development  Computer class room with No Model development			Graphics (I)	X		No	Programming exercises		
Graphics (II)  Graphics (III)  X Matlab No Programming exercises  Computer class room with Natlab No Programming exercises  Graphics (III)  X Matlab No Programming exercises  1,6  Computer class room with Natlab No Programming exercises  Computer class room with Natlab No Model development  Case study implementation (I)  X Matlab No Model development  Case study implementation (II)  X Matlab No Model development  Computer class room with Natlab No Model development									
Graphics (II)  X Matlab No Programming exercises  Computer Class room with No Programming exercises  Graphics (III)  X Matlab No Programming exercises  Computer Class room with No Programming exercises  Computer Class room with No Model development  Case study implementation (I)  X Matlab No Model development  Case study implementation (II)  X Matlab No Model development  Case study implementation (III)  X Matlab No Model development  Computer Class room with No Model development  Case study implementation (III)  Case study implementation (III)  Computer Class room with No Model development  Computer Class room with No Model development	9	18						1.6	
Computer class room with No Programming exercises  Computer class room with No Programming exercises  Computer class room with No Model development  Case study implementation (I)  Case study implementation (II)  X Matlab No Model development  Computer class room with No Model development		10						2,0	
Class room with No Programming exercises  Computer class room with No Model development  Case study implementation (I)  Case study implementation (II)  X Matlab No Model development  Computer class room with No Model development			Graphics (II)	Х		No	Programming exercises		6
To a study implementation (II)  Case study implementation (II)  X Matlab No Programming exercises  Computer class room with No Model development  Case study implementation (II)  X Matlab No Model development  Case study implementation (II)  X Matlab No Model development  Case study implementation (II)  X Matlab No Model development  Computer class  Computer class  Computer class  To Computer class									
Graphics (III)  X Matlab No Programming exercises  Computer class room with No Model development  10 20 Case study implementation (I)  X Matlab No Model development  Case study implementation (II)  X Matlab No Model development  Case study implementation (III)  X Matlab No Model development  Computer class room with No Model development  Computer class	10	19						1.6	
Computer class room with Matlab No Model development 1,6  Case study implementation (I)  X Matlab No Model development 6  Computer class room with Case study implementation (II)  X Matlab No Model development 1,6  Computer class room with Case study implementation (II)  X Matlab No Model development 1,6  Computer class 1,6		13						1,0	
10 20 Case study implementation (I) X Matlab No Model development 6  Computer class room with X Matlab No Model development 1,6  Case study implementation (II) X Matlab No Model development 1,6  Computer class room with No Model development 1,6  Computer class 1,6			Graphics (III)	Х		No	Programming exercises		
To with Case study implementation (I)  In the Case study implementation (II)  X Matlab No Model development  Case study implementation (II)  X Matlab No Model development  Computer Class  Toom with No Model development  Computer Class  1.6									
Case study implementation (I)  X Matlab No Model development  Computer class room with  Case study implementation (II)  X Matlab No Model development  Computer class  Computer class  1,6  Computer class	10	20						1.6	
Computer class room with X Matlab No Model development  Computer class room with X Case study implementation (II)  Computer class 1,6  Computer class 1,6		20						1,0	
11 21 Case study implementation (II) X Matlab No Model development  Computer class 1,6			Case study implementation (I)	Х		No	Model development		6
11 21									
Case study implementation (II)  X Matlab No Model development  Computer class	11	21						1.6	
Computer class								1,0	
class			Case study implementation (II)	X		No	Model development		
11   77	11								
1   2		22						1.6	
		22			room with			1,0	
Case study implementation (III) X Matlab No Model implementation 7			Case study implementation (III)	X	Matlab	No	Model implementation		7

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

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

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

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

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