

COURSE: CALCULUS III

DEGREE: INDUSTRIAL TECHNOLOGY ENGINEERING

YEAR: THIRD

TERM: FIRST

	WEEKLY PLANNING										
WEE K	SE SSI ON	DESCRIPTION	GROUPS (mark X)		SPECIAL ROOM FOR SESSION (Comput er class	Indicate YES/NO If the session	WEEKLY PROGRAMMING FOR STUDENT				
			LECTUR ES	SEMINA RS	room, audio-vis ual class room)	teachers	DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)		
1	1	Chapter 1: First order differential equations. Definition and examples. Elementary resolution methods: Separation of variables, homogeneous equations, exact equations.	x			NO	Study of subject's theory.	1,6	6,5		
1	2	Exercises and discussion.		Х		NO	Exercises of assignment 1.1.	1,6			
2	3	Elementary resolution methods (continued): Integrating factors, linear equations, Bernoulli equations.	x			NO	Study of subject's theory.	1,6	6,5		
2	4	Exercises and discussion.		Х		NO	Exercises of assignment 1.2.	1,6			
3	5	Applications.	X			NO	Study of subject's theory.	1,6	6,5		

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3	6	Exercises and discussion.		X	NO	Exercises of assignment 1.3.	1,6	
4	7	Chapter 2: Higher order equations. Linear equations of order n with constant	х		NO	Study of subject's theory.	1,6	6,5
4	8	Exercises and discussion.		X	NO	Exercises of assignment 2.1.	1,6	
		Equations with variable coefficients.				5		
5	9	Order reduction and equidimensional equations. Relation to linear systems.	Х		NO	Study of subject's theory.	1,6	6,5
5	10	Exercises and discussion.		X	NO	Exercises of assignment 2.2.	1,6	
6	11	Chapter 3: Laplace transform. Definition and properties. Transforming and backtransforming.	х		NO	Study of subject's theory.	1,6	6,5
6	12	Exercises and discussion.		X	NO	Exercises of assignment 3.1.	1,6	
7	13	Application to solving linear equations and systems.	Х		NO	Study of subject's theory.	1,6	6,5
7	14	Exercises and discussion.		X	NO	Exercises of assignment 3.2.	1,6	
8	15	CONTROL EVALUATION 1	Х		NO	Control exam.	1,6	65
8	16	Exercises and discussion.		X	NO	Exercises of assignment 3.2.	1,6	0,5
9	17	Chapter 4: Introduction to partial differential equations. Initial and boundary value problems. Examples of PDEs from Mathematical Physics. Different kinds of equations and data. Classification of second order PDEs.	Х		NO	Study of subject's theory.	1,6	6,5
9	18	Exercises and discussion.		X	NO	Exercises of assignment 4.1 and 4.2.	1,6	
10	19	Chapter 5: Method of separation of variables. Odd, even, and periodic extensions of a function. Trigonometric Fourier series. Orthogonality. Covnergence. Derivation and integration.	Х		NO	Study of subject's theory.	1,6	6,5
10	20	Exercises and discussion.		X	NO	Exercises of assignment 5.1.	1,6	
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11	21	Solving PDEs by separation of variables and Forier series.	X		NO	Study of subject's theory.	1,6	6,5
11	22	Exercises and discussion.		Х	NO	Exercises of assignment 5.1.	1,6	0,0
12	23	Solving PDEs by separation of variables and Forier series (continued).	x		NO	Study of subject's theory.	1,6	6,5
		Complex form of a Fourier series.						
12	24	Exercises and discussion.		X	NO	Exercises of assignment 5.2.	1,6	
13	25	Chapter 6: Sturm-Liouville problems. Definition and properties.	x		NO	Study of subject's theory.	1,6	6,5
13	26	Exercises and discussion.		X	NO	Exercises of assignment 6.1 and 6.2.	1,6	
14	27	Solving Sturm-Liouville problems.	Х		NO	Study of subject's theory.	1,6	
14	28	Exercises and discussion.		Х	NO	Exercises of assignment 6.2.	1,6	6,5
	29	Review and tutoring.	Х		NO		1,6	
Subtotal 1								91
Total 1 (Hours of class plus student homework hours between weeks 1-14)							13	9,33

15		Control evaluation 2. Tutorials, handing in, etc		Х		NO		2	6
16									
17		Assessment						3	6
18									
							Subtotal 2	5	12
Total 2 (Hours of class plus student homework hours between weeks 15-18)					17				

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

TOTAL (Total 1 + Total 2)	156,33
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