

Math 303 Winter 2012 Lecture and Homework Schedule

Lecture			Homework				
Supplemental Problems S# to be found in Outcome Statements							
M	Jan.	2		M	Jan.	2	
T	Jan.	3		T	Jan.	3	
W	Jan.	4	Introduction	W	Jan.	4	
R	Jan.	5	1.1 Some Basic Mathematical Models; Direction Fields	R	Jan.	5	
F	Jan.	6	1.2-4 Solutions of Some D.E.'s; Classification of D.E.'s	F	Jan.	6	
M	Jan.	9	2.1 Linear Equations with Variable Coefficients	M	Jan.	9	1.1: 1,5,7,9,21,22,23
T	Jan.	10	2.2 Separable Equations	T	Jan.	10	1.2: 1,2,5,9,11(a)(b)(d),15; 1.3: 1-6,7,14,21,22,25,26
W	Jan.	11	2.3 Modeling with First Order Equations	W	Jan.	11	2.1: 8,11,13,16,25,32
R	Jan.	12	2.4 Differences Between Linear and Nonlinear Equations	R	Jan.	12	2.2: 4,6,7,11,14,21,26,30,32; S1,S2
F	Jan.	13	2.5 Autonomous Equations and Population Dynamics	F	Jan.	13	2.3: 3,4,18,20,21,22(c)
M	Jan.	16	<i>Holiday</i>	M	Jan.	16	
T	Jan.	17	2.5 Autonomous Equations and Population Dynamics	T	Jan.	17	2.4: 2,4,8,14,17,19,22(a)(b),23; S3
W	Jan.	18	2.6 Exact Equations and Integrating Factors	W	Jan.	18	2.5: 3,7,9,14,16(a)(b),17(a)
R	Jan.	19	<i>Presentation</i>	R	Jan.	19	2.5: 22,23,24,28; S4
F	Jan.	20	<i>Review</i>	F	Jan.	20	2.6: 1,4,11,15,19,23,25,30; S5
Test 1 Jan. 20 (4 p.m.) - Jan. 24 (5 p.m.) on 1.1 - 2.6							
Retake for Exam 1 Feb. 3							
M	Jan.	23	3.1 Homogeneous Equations with Constant Coefficients	M	Jan.	23	
T	Jan.	24	3.2 Fundamental Solutions; Wronskian	T	Jan.	24	
W	Jan.	25	3.2 Fundamental Solutions; Wronskian	W	Jan.	25	3.1: 2,8,10,16; 2.9 (p.133) 37,44,48,51; S6
R	Jan.	26	3.3 Complex Roots of the Characteristic Equation	R	Jan.	26	3.2: 3,6,10,12,13,14,24,25
F	Jan.	27	<i>Review</i>	F	Jan.	27	3.2: 31,32,33,34,35,36
M	Jan.	30	3.4 Repeated Roots; Reduction of Order	M	Jan.	30	3.3: 2,6,11,12,17,18,19,24(a)
T	Jan.	31	3.5 Nonhomogeneous Equations; Method of Undetermined Coefficients	T	Jan.	31	
W	Feb.	1	3.6 Variation of Parameters	W	Feb.	1	3.4: 1,4,8,11,16,17,27,28
R	Feb.	2	3.7 Mechanical and Electrical Vibrations	R	Feb.	2	3.5: 2,3,6,13,17,19(a),23(a); S7
F	Feb.	3	<i>Review</i>	F	Feb.	3	3.6: 5,8,15,17,28; S8,S9
M	Feb.	6	3.7 Mechanical and Electrical Vibrations	M	Feb.	6	3.7: 5,6,7,24
T	Feb.	7	3.8 Forced Vibrations	T	Feb.	7	
W	Feb.	8	3.8 Forced Vibrations	W	Feb.	8	3.7: 11,13,17,20; S10
R	Feb.	9	4.1 General Theory of nth Order Linear Equations	R	Feb.	9	3.8: 2,5,7(a)(c),9,10; S11
F	Feb.	10	<i>Review</i>	F	Feb.	10	3.8: 6,8(a)(c),11,12; S12
M	Feb.	13	4.2 Homogeneous Equations with Constant Coefficients	M	Feb.	13	4.1: 3,8,14,15,17,25,28; S13
T	Feb.	14	4.3 The Method of Undetermined Coefficients	T	Feb.	14	
W	Feb.	15	4.4 The Method of Variation of Parameters	W	Feb.	15	4.2: 1,2,8,9,11,17,24,29,31
R	Feb.	16	<i>Presentation</i>	R	Feb.	16	4.3: 2,5,11,14,17; S14
F	Feb.	17	<i>Review</i>	F	Feb.	17	4.4: 1,7,9,12,13; S15
Test 2 Feb. 17 (4 p.m.) - Feb. 21 (5 p.m.) on 3.1 - 4.4							
Retake for Exam 2 Mar. 2							
M	Feb.	20	<i>Holiday</i>	M	Feb.	20	
T	Feb.	21	5.1 Review of Power Series	T	Feb.	21	
W	Feb.	22	5.2 Series Solutions near an Ordinary Point, Part I	W	Feb.	22	

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R	Feb.	23	5.3 Series Solutions near an Ordinary Point, Part II	R	Feb.	23	5.1: 5,8,12,15,17,18,19,25,27,28
F	Feb.	24	<i>Review</i>	F	Feb.	24	5.2: 2,6,15(a),16(a)
M	Feb.	27	5.4 Euler Equations	M	Feb.	27	5.3: 1,3,7,11,12
T	Feb.	28	6.1 Definition of Laplace Transform	T	Feb.	28	
W	Feb.	29	6.2 Solution of Initial Value Problems	W	Feb.	29	5.4: 1,3,10,13,14,15
R	Mar.	1	6.3 Step Functions	R	Mar.	1	6.1: 1,2,3,5(a)(b),6,7,10,22,23
F	Mar.	2	<i>Review</i>	F	Mar.	2	6.2: 4,5,8,11,16,21,29,30,31
M	Mar.	5	6.4 Differential Equations with Discontinuous Forcing Functions	M	Mar.	5	6.3: 3,6,15,17,19,21; S16
T	Mar.	6	6.5 Impulse Functions	T	Mar.	6	
W	Mar.	7	6.6 The Convolution Integral	W	Mar.	7	6.4: 2(a),3(a),11(a),19(a)(b); S17
R	Mar.	8	<i>Presentation</i>	R	Mar.	8	6.5: 2(a),3(a),11(a),13(a),16(a)(b)(c),18(a)(c); S18
F	Mar.	9	<i>Review</i>	F	Mar.	9	6.6: 1(a)(b),2,3,5,6,9,10,13,15; S19
Test 3 Mar. 9 (4 p.m.) - Mar. 13 (5 p.m.) on 5.1 - 6.6 Retake for Exam 3 Mar. 23							
M	Mar.	12	10.1 Two-Point Boundary Value Problems	M	Mar.	12	
T	Mar.	13	10.2 Fourier Series	T	Mar.	13	
W	Mar.	14	10.3 The Fourier Convergence Theorem	W	Mar.	14	10.1: 3,4,6,10,11,14,15,18; S23
R	Mar.	15	10.4 Even and Odd Functions	R	Mar.	15	10.2: 1,3,4,7,8,13,14,15,18,19,20,22
F	Mar.	16	<i>Review</i>	F	Mar.	16	10.3: 2,3,5,7,9,10
M	Mar.	19	10.5 Separation of Variables; Heat Conduction in a Rod	M	Mar.	19	10.3: 17; 10.4: 1,3,5,7,8,11,15,16,17,18,35,36
T	Mar.	20	10.6 Other Heat Conduction Problems	T	Mar.	20	
W	Mar.	21	10.7 The Wave Equation; Vibrations of an Elastic String	W	Mar.	21	10.5: 1,3,5,7,9,10,22
R	Mar.	22	10.8 Laplace's Equation	R	Mar.	22	10.6: 1,3,6,7,9(a),12(a)(b),14(a)
F	Mar.	23	<i>Review</i>	F	Mar.	23	10.7: 1(a),2(a),5(a),6(a),15(b,c)
M	Mar.	26	10.8 Laplace's Equation	M	Mar.	26	
T	Mar.	27	7.1-3 Review of Eigenvalues and Eigenvectors	T	Mar.	27	
W	Mar.	28	7.4 Basic Theory of Systems of First Order Linear Equations	W	Mar.	28	10.8: 1(a)(b),3(a),10,11; S24
R	Mar.	29	<i>Presentation</i>	R	Mar.	29	7.1: 2,4,7(a)(b),8(a)(b),18,22; 7.2: 21,24,25
F	Mar.	30	<i>Review</i>	F	Mar.	30	7.3: 13,15,16,17,23,25; 7.4: 1,6(a)(b),7(a)(b); S20
Test 4 Mar. 30 (4 p.m.) - Apr. 3 (5 p.m.) on 10.1 - 10.8 (No retake for Exam 4)							
M	Apr.	2	7.5 Homogeneous Linear Systems with Constant Coefficients	M	Apr.	2	
T	Apr.	3	7.6 Complex Eigenvalues	T	Apr.	3	
W	Apr.	4	7.7 Fundamental Matrices	W	Apr.	4	7.5: 1,2,7,16,18,30(a); 9.1: 2(a)(b)(c),3(a)(b)(c),8(a)(b)(c),
R	Apr.	5	7.8 Repeated Eigenvalues	R	Apr.	5	7.6: 1,2,7,13; 9.1: 5(a)(b)(c),6(a)(b)(c),7(a)(b)(c); S21
F	Apr.	6	7.9 Nonhomogeneous Linear Systems	F	Apr.	6	7.7: 3,5,6,11,12,14,15
M	Apr.	9	<i>Review</i>	M	Apr.	9	7.8: 1,4,5,8,11; 9.1: 4(a)(b)(c),9(a)(b)(c),11(a)(b)(c),
T	Apr.	10	<i>Review</i>	T	Apr.	10	7.9: 1,8,11,12,14; S22
W	Apr.	11	<i>Review</i>	W	Apr.	11	
R	Apr.	12	<i>Reading Day</i>	R	Apr.	12	
F	Apr.	13	<i>Reading Day</i>	F	Apr.	13	
Final Exam Apr. 14 - Apr. 19 (comprehensive)							