

Math 282 Winter 2016 Tentative Schedule - [Trench Differential Equations](#)

Wk	Sec	Topic	Problems	Notes
1	1.1	Intro; DE as real world models		
	1.2	Language and Notation; Solutions	1ad, 2acdf, 3bdfi, 4acdf, 5ad, 6ac, 7, 8	
	1.2	Integrals; IVPs	4-10	
	1.3	Slope Fields; Solution Curves	2-22 even (Maple or NSpire or Math Scoop for plots)	Maple DEPlot
2*	2.1	Linear 1st-Order Eq. (Homogeneous)	2-10 even	
	2.1	Linear 1st-Order Equations (General)	12, 14, 16, 18, 26, 28, 30, 32, 43, 46	
	2.2	Separable Equations	2-16 even, 27, 28	
3	2.3	Existence & Uniqueness	2, 4, 6, 8, 20	
	2.4	Transformations - Bernoulli	2-12 even	Exam 1
4	2.5	Exact Equation	2, 4, 8, 10, 18, 20, 26, 36, 37b	
	2.6	Integrating Factors	4, 6, 8, 10, 12, 24, 26	
	3.1	Intro to Euler's Method	6, 8	
5	3.2	Euler's Method Continued		
	4.1	Population Models		
	4.2	Cooling and Mixing		
6	4.3	Elementary Mechanics	2, 4, 6, 8, 11	Exam 2
	5.1	2 nd Order Homogeneous	2, 4, 5, 10, 12	
7	5.2	Constant Coefficients	2, 4, 6, 12, 14, 16, 18, 24, 5, 26	
	5.3	Non-homogeneous Equations	2, 4, 6, 8, 10, 16, 24, 26, 28	
	5.4	Undetermined Coefficients I	2-22 even, 32, 34	
8	5.5	Undetermined Coefficients II	2, 4, 8, 12, 18, 22, 24	
	5.7	Variation Of Parameters	2, 4, 6, 8, 10, 12	
	6.1	Spring Motion	2, 4, 6, 8, 10	
9	6.2	Spring Motion II	2, 4, 6, 8, 10	Exam 3
	7.1	Power Series	1abcd, 2, 3abcd, 4, 5abc	
	7.2	Series Solutions Near Ordinary Point	2, 4, 6, 8, 9	
10*	7.3	Series Solutions Near Singular Point		
	8.1	LaPlace Transforms		
	8.2	Inverse LaPlace Transforms		
11	8.3	IVPs		

	8.4	Unit Step Functions		
12	9.1	Higher Order Linear Equations		Exam 4
	9.2	Homogeneous Higher Order Eq		
	9.3	Undetermined Coefficients		
13	10.1	Systems Of Differential Equations		
	10.2	Linear Systems of Differential Equations		
	10.3	Homogeneous Linear Systems		
	10.4	Constant Coefficients I		