

Math 365 Honors Analysis I

Fall 2000

Aug 23	Introduction	#1 p.44:1,3,5,7,11,15	
Aug 23	Chapt.1, 1–5 Review		
28	Chapt.2, 7–12 1st Order	#2 p.75:1,2,4,10,11,13	
30	Chapt.3, 14–16 2nd Order Linear	#3 p.86:1,8,9,10;p.91:3,9;p.94:2	
Sep 1	Chapt.3, 17–19 2nd Order Linear Methods	#4 p.97:2acd,3,4;p.103:1c,2,3a	
4	Chapt.3, 22–23 Higher Order Linear	#5 p.127:3,5,7,20,21,22ac	
6	Chapt.3, 23 Operator Methods	#6 p.135:1,2,7,16	
8	Chapt.4, 24 Sturm Separation	#7 p.161: 2,3,4	<i>Quiz 1</i>
11	Chapt.4, 25 Sturm Comparison	#8 p.164: 1,2,3	
13	Chapt.4, 25 Sturm Comparison		
15	Chapt.5, 26 Power Series	#9 p.171: 2,5,6,7	
18	Chapt.5, 27 Series Solutions, 1st Order	#10 p.175: 1,2,3,4b	
20	Chapt.5, 28 Series Solutions, 2nd Order	#11 p.182: 1,5,6	
22	Chapt.5, 28 Series Solutions, 2nd Order		
25	Chapt.5, 29 Regular Singular Points	#12 p.191: 1,3,4ab,5; p.198:3ab,4,5	
27	Chapt.5, 30 Regular Singular Points		
29	Chapt.6, 33 Fourier Series	#13 p.256: 1,2,3,5,6,7	<i>Quiz 2</i>
Oct 2	Chapt.6, 33 Fourier Series	#14 p. 263:1–4	
4	Chapt.6, 34 Convergence		
6	Chapt.6, 35–36 Even and Odd, Arbitrary Intervals	#15 p. 270:8,10,11; p.276:10,11	
9	Chapt.6, 37 Orthogonal Functions		
11	Chapt.6, 38 Mean Convergence		
13	<i>Midterm Exam</i>		
14–22	<i>Midsemester Break</i>		
23	Chapt.7, 39–40 PDE, Vibrating String	#16 p.308:1,2,5,7	
25	Chapt.7, 41 Heat Equation I	#17 p.308:2–6	
27	Chapt.7, 41 Heat Equation II, Mma Demo		
30	Chapt.7, 42 Dirichlet Problem I	#18 p.322:1–4	
Nov 1	Chapt.7, 42 Dirichlet Problem II		
3	Chapt.9, 48–49 Laplace Transforms	#19 p.384:1–6	<i>Quiz 3</i>
6	Chapt.9, 49–50 Applied to Diff. Eq.	#20 p.394:1–4	
8	Chapt.9, 51 Derivatives and Integrals	#21 p.398:1–5	
10	Chapt.9, 52 Convolutions, Abel’s Problem	#22 p.404:1,2a,5	
13	Chapt.9, 53 Unit Step and Impulse Functions	#23 p.410:1–4	
15	Chapt.10, 54–55 Linear Systems	#24 p.420:1,2; p.426:4–8	
17	Chapt.10, 55 Linear Systems		<i>Quiz 4</i>
20	Chapt.10, 56 Constant Coefficients	#25 p.433:1,5	
22	Chapt.10, 56 Complex & Repeated Roots		
23–26	<i>Thanksgiving Holiday</i>		
27	Chapt.10, 56 Variation of Parameters	#26 Handout	
29	Chapt.11, 58 Autonomous Systems, Phase Plane	#27 p.446:3,4,6,7	
Dec 1	Chapt.11, 59 Critical Points, Stability	(#28 p.454:1–3)	<i>Quiz 5</i>
4	Chapt.11, 60 Stability for Linear Systems	(#29 p.464:1,3)	
6	Chapt.11, 62–63 Simple Critical Points	(#30 Handout)	
7–8	<i>Study Days</i>		
Dec 15	<i>Final Exam</i> 8:00–10:00 a.m.		