
Differential Equations

Math 341 Fall 2008
©2008 Ron Buckmire

Fowler 307 MWF 2:30pm - 3:25pm
<http://faculty.oxy.edu/ron/math/341/08/>

Week 9

Monday October 20 : *Worksheet 20*

Special Cases: Repeated and Zero Eigenvalues. We conclude our survey of linear systems of ODEs by considering some of the special cases of matrices with repeated eigenvalues or eigenvalues that are zero.

Reading:

Blanchard, Section 3.5

Homework #19:

Blanchard, Section 3.5: 3, 4, 9, 10, 17, 18.

Wednesday October 22 : *Worksheet 21*

Second-Order Linear ODEs. The joys of harmonic motion! We shall more closely examine the standard second order constant-coefficient ODE $y'' + ay' + by = 0$ now that we have completed the analysis of the analogous first order system of 2 linear ODEs.

Reading:

Blanchard, 3.6

Homework #20:

Blanchard, Section 3.6: 4, 5, 16, 33, 38.

Quiz:

Reading Quiz #4 on Sections 3.1 to 3.5.

Friday October 24 : *Worksheet 22*

Trace-Determinant Plane. We shall summarize all the possible equilibria one can get with a 2x2 linear system of ODEs into one big picture!

Reading:

Blanchard, Section 3.7

Homework #21:

Blanchard, Section 3.7: 1, 6.