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# Differential Equations

Math 341 Spring 2005  
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MWF 8:30 - 9:25am Fowler North 2  
<http://faculty.oxy.edu/ron/math/341>

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## Week 5

Monday February 14 *Class 12:*

**Systems of Differential Equations.** Systems of first-order differential equations often exhibit much more complex behavior than can be realized from first-order differential equation with one dependent and independent variable.

Reading:

Zill, (Section 3.3)

Homework Set # 5: (*due Friday February 18*)

Zill, Section 3.3: 1\*, 15\* *EXTRA CREDIT* Page 121, #8; Page 122 #18

**Quiz #4 DUE**

**BONUS Quiz #2 DUE**

Wednesday February 16 *Class 13:*

**Linear Differential Equations of Any Order.** We shall begin looking at higher order differential equations, beginning with  $n$ -th order linear DEs.

Reading:

Zill, (Section 4.1, 4.2)

Homework Set #5: (*due Friday February 18*)

Section 4.1: 5\*, 7\*, 8\*, 12\* *EXTRA CREDIT* 36, 37

Friday February 18 *Class 14:*

**Reduction of Order.** We shall continue looking at higher order differential equations by learning the technique of *reduction of order*

Reading:

Zill, (Section 4.3)

Homework Set # 6: (*due Friday February 25*)

Zill, Section 4.2: 2\*, 11\*, 19\*

**Quiz #5**

**BONUS Quiz #3 online**