Unit 12 Outline – Differential Equations

Thursday 3/7	**Today's Topic:** A graphical look at solutions to differential equations – slope fields
In-Class Examples: Make the slope field (solution field) for the following differential equations: 1) $\dfrac{dy}{dx} = x + y$ 2) $\dfrac{dy}{dx} = xy$ 3) $\dfrac{dy}{dx} = -\dfrac{y}{x}$	
Homework: Worksheet 97	

Friday 3/8	**Today's Topic:** Learning to solve differential equations numerically using Euler's method.
In-Class Examples: Notes Handout	
Homework: Worksheet 98	

Monday 3/11	**Today's Topic:** Learning to solve differential equations numerically using Euler's method.
In-Class Examples: Consider the differential equation $\dfrac{dy}{dx} = (\sin x)(\sin y)$, approximate $f(0.3)$ using Euler's method with three steps and $dx = 0.1$ starting at $(0,2)$.	
Homework: Worksheet 99	

Tuesday 3/12	**Today's Topic:** Learning to solve differential equations by variables separable
In-Class Examples: Notes Handout	
Homework: Worksheet 100 (1-8)	

Wednesday 3/13	**Today's Topic:** Law of Exponential Change
In-Class Examples: Notes Handout	
Homework: Worksheet 100 (11-16)	

Thursday 3/14	**Today's Topic:** Solving logistic differential equations and using them to solve problems.
In-Class Examples: Notes Handout	
Homework: Worksheet 101 (1-4)	

Friday 3/15	**Today's Topic:** Solving logistic differential equations and using them to solve problems.
In-Class Examples: Notes Handout	
Homework: Worksheet 101 (5-9)	

Monday 3/18	**Today's Topic:** Review for the Test
In-Class Examples: None	
Homework: Worksheet 102	

Tuesday 3/19	**Today's Topic:** The Test
In-Class Examples: None	
Homework: None	