MATH 316 – Fall 2016

APPLIED ORDINARY DIFFERENTIAL EQUATIONS

Professor: Monika Nitsche

Office: SMLC 334

Office Hours: MW 10-11 (SMLC 334), F 10-11 (Calculus Table), by appointment

Contact: nitsche@math.unm.edu

Class Time and Place: MWF 2:00-2:50, DSH 326

Text: Boyce/DiPrima, *Elementary Differential Equations*
       Polking and Arnold, *ODEs using Matlab* (optional)

Prerequisite: Math 163
Corequisite: CS 151 or CS 251 or Phys 290 or ECE 131

About the Course:

We will have weekly homework assignments, 3 in-class exams, and one final exam. Some homework components require MATLAB. Homework will be collected in class on the due date.

The course grade will be determined according to the following distribution

Three in-class exams:	100 pts each
Daily Homework:	150 pts
Final Exam:	200 pts
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Total :	650 pts

You are strongly encouraged to collaborate with other students on the homework. However, you must hand in each solution in your own handwriting and your own words.

Here is an outline of the material :
1. Introduction (Chapter 1)
2. First order equations (Chapter 2)
2. Second order linear equations (Chapter 3)
3. Laplace Transform for linear equations (Chapter 6)
4. Second order linear systems (Chapter 7)
5. Nonlinear systems (Chapter 9)