

Welcome to Math 1360, Mathematical Modeling!

We will be covering interesting, fun and beautiful topics. Come to every class prepared. Don't get behind! If you have problems, let me know early!

Math 1360, CRN 11459, MWF 10-10:50, Benedum 00227, Grader: Zytoon, fall 2015

Instructor: William Layton, TY 603, 412-624-8312, wjl@pitt.edu

Course Materials: I will make available complete lecture notes. [I am still wrangling with figures. It is possible I will distribute the figures separately.] **The notes are a book on the subject you are getting for free** including exercises.

The official text is: Strogatz, Nonlinear Dynamics and Chaos, a classic book that every applied math student should have. It covers the material I'll be covering with more detail and in greater depth. It is a rare math book in that it is actually fun to read too. It's not expensive and has been out for a long time so second hand copies are available.

Important note: Every test and every quiz question from all my past 1360 classes are in my lecture notes as exercises. Test and quiz questions will be similar (not identical). Make sure you can work all the exercises [not just the ones assigned]. A solution manual is not available for the exercises [you must do the work yourself].

Course requirements and grades: Average of the following, equally weighted 5 things:

Exam 1 Wednesday September 30, Exam 2 Wednesday October 28

Final exam - as scheduled in the schedule of classes,

Term Homework average

Term project grade: Steps: 1. find a topic of interest and write a 1-2 page synopsis of what you propose to do. Submit the 2 pages with a Xerox copy of one source for approval and give a 2 minute elevator talk to the class about the topic by **Monday October 15**. 2. Find two more sources; read them and develop a 10 page technical paper on the topic. Paper is due by **Monday of the last week of classes**. 3. Give 15 minute technical talk on topic to the class. More details about project, paper and talk will be given as class goes along.

Project grade criteria include: Is the topic relevant to the class? Is the presentation understandable by the students [not just the teacher]? Is the topic understood by the presenter? Is the presentation based on at least 3 sources? Is the topic presented in writing and in the talk in an interesting manner that captures the interest of the class [no questions at the end is bad]?