MAT 22B, Section 1
Spring, 2002

Time:	MWF 09:00 - 09:50 am
Place:	Roessler 66
Instructor:	Ju Wang
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Office Hours:	MWF 10:30 am to 12:00 Noon, Thursday 3:00 pm – 4 : 00 pm
Website :	This class share the same website with 22b , section 2 by Professor Bruno Nachtergael : http://math.ucdavis.edu/ bxn/m22b.html

Textbook: Elementary Differential Equations, 7th edition.
Author: W.R. Boyce and R.C. DiPrima

This course is going to be a challenge to every one in the class. Although the course is listed as 22B , but the materials are quite difficult. It requires you to be very serious at the very beginning. But , you do not have to be nevious to be serious . What I suggest is that you do some meditation on the subjects of this course you are going to engage for the whole quarter, have a better and cleaerer understanding about the basic notions , then do homeworks.

- Diffrent types of differential equations we are going to deal with: You must recognize them when you see one , and you must remember the basic properties the have.
  (1) first order linear equations
  (2) higher order linear equations
  (3) systerm of linear equations
- The methods that enable us to solve the DE's mentioned above. Here is where the major difficulties would apear. What I suggest here is that do not just try to memorize the formula and the proceess, try to understand the way the methods come from (i.e., **the reasons why it is a method that works.**) This is much easier to remember — and when you remember this you remember every thing , most importantly, you understood every thing !
- Various application problems — i.e., the models in physics, chemistry , social science , economy etc. We will learn a common routine that how we should construct a model by differential equations or system of equations. This part is more fun. But , one may have a little difficult to do this right : You are given a application problems in words. You will be doing : (a) Read it , (b) understand the situation described by words. (c) Recall the relative laws valid in this particular situation (usually, the laws come from another fields, such as Newton's second law ; the population growth law, etc.) Now you will start doing this : (a) Give names to the factors in the questions (usually, we name them by different variables , constants, etc.) (b) basic functions that set up the basic relations between these variables and constants . (c) The law's would help you to set up the differential equations

— i.e., you actually give a mathematical model to the the situation in question. (d) solve the differential equation.

Generally speaking, we interpret the situation in the problems by mathematical formula , then solve this math. problem , give an answer to the problem.

Midterm Exams: There will be two midterm exams:
First Midterm: April 29, Monday , 9:00 am – 9:50 am , Roessler 66
Second Midterm: May 20 , Monday , 9:00 am – 9:50 am , Roessler 66

Final Exam: June 10 , Monday , 4:00pm - 6:00 pm, Roessler 66

The Percentage:

- Total points: 100
- Final exam – 50 points.
- Midterms —- 20 points each.
- Homework – 10 points.

Homeworks:

The homework will be assigned weekly. Usually, Due to next Monday.

TA consulting:

There are four TA's for our class waitting eagerly to help you. They will give office hours . The list of their office hours and locations of their office will be availble soon. I will give it to ,also it will apear on the website.

Finally,let me say this to you : it is always difficult to start. But when you actually get into the topics , you will enjoy it. Please believe it: youcan actually have fun by doing math.

Good luck to every one in the class.