Math 2410Q (Spring 2015) Differential Equations

Jonathan Judge

Administrative information:

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- Office Hours: T 3:30-5:00, W 4:45-6:25

Text:

- Blanchard, Devaney, and Hall, **Differential Equations**, 4th edition

Syllabus

Exams: No makeup exams except for extreme, documented cases. You must notify me of such issues immediately.

- Midterm 1: Wednesday, February 25th (in class)
- Midterm 2: Wednesday, April 8th (in class)
- Final:
  - Section 3 (MW 6:30-7:45pm): The exam is in **MSB 215** on **Monday, May 5th, 2015** from **6-8pm**
  - Section 4 (MWF 12:20-1:10pm): The exam is in **KNS 201** on **Monday, May 5th, 2015** from **1-3pm**

Resources:

- Videos of Professor Joe McKenna's lectures.
- Slope Field Grapher
- Q Center - See this page to find tutors who can help with Differential Equations

Handouts and Homework:

- Week 1:
  - **Section 1.8:** 1-13, 20-24, read 19 to get an idea of how to do 21-24
    It has come to my attention that, as of Monday Jan. 26th, the bookstore has not yet received its major shipment of books for this course. So, I have written up the main problems for this section here: HW 1.8 problems . The game (as usual) is to determine y as explicitly as possible. In problems 7-11, you are given an initial condition which allows you to solve for the arbitrary constant that shows up.
- Week 2:
  - **Section 1.2:** 5-41 (odd)
  - **Section 1.9:** 1-12, 24-26
  - Quiz 1: take home (because of snow and textbook issues), due Monday Feb. 3.
  - **Quiz 1 Solutions**
- Week 3:
  - **Section 1.3:** 7-10, 16
  - **Section 1.4:** 1-4, 5, 6, 11
  - **Section 1.5:** 1-7 (odd), 12, 13
  - **Quiz 2 Solutions**
- Week 4:
  - **Section 1.6:** 1-37 (odd)

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    - **Section 1.7:** 1-13 (odd)
    - **Quiz 3 Solutions**
    - **Recommended Chapter 1 Review Exercises:** 1, 4, 6, 8, 11-41 (odd), 48, 49, 52, 53, 54
- Week 5:
    - **Section 2.1:** 1-7, 9, 11, 19
    - **Section 2.2:** 1-7 (odd, parts a/b only), 11, 13a, 21
    - **Section 2.3:** 1b, 3b, 7
    - **Practice Exams:** Professor McKenna has sample exams here and here. These are good for practice, although questions 3 and 7 are on topics that we will not cover prior to the exam, so they will not be on it.
    - **Quiz 4 Solutions**
- Week 6: **Exam 1**
- Week 7:
    - **Section 2.4:** 1-13 (odd); For the ones that say "Using HPGSystemSolver...", you should use the "by-hand" graphing method presented in class.
    - **Section 2.5:** 1, 3
    - **Section 2.6:** 3, 4, 5
    - **Quiz 5 Solutions:** section 4 (MWF 12:20-1:10) and section 3 (MW 6:30-7:45)
- Week 8:
    - **Section 3.1:** 5-9, 17, 27, 29
    - **Section 3.2:** 1-7 (odd, can skip part c), 11, 13
    - **Quiz 6 Solutions**
- Week 9: Spring Break!
- Week 10:
    - **Section 3.3:**1-11 (odd), 19
    - **Section 3.4:**1-15 (odd), 19
    - **Section 3.5:**1-9 (odd)
    - **Quiz 7 Solutions**
- Week 11:
    - **Section 3.6:**1-7 (odd), 13, 15
    - **Practice Exams:** Professor McKenna has sample exams here and here.
    - **Quiz 8 Solutions**
- Week 12: **Exam 2 on Wednesday in class**
- Week 13:
    - **Section 4.1:**1-13 (odd)
    - **Section 4.2:**1-13 (odd)
    - **Section 4.3:**1-11 (odd)
    - **Quiz 9 Solutions**
- Week 14:
    - **Section 6.1:**1, 3, 7, 13-25 (odd)
    - **Section 6.2:**1-15 (odd)
    - **Quiz 10 Solutions**
- Week 15:
    - **Section 6.3:**11-17 (odd), 27-33 (odd)
    - **Section 6.4:**2-5
    - **Practice Final Exams**: Professor McKenna has sample exams here, here, and here.
    - **Quiz 11 Solutions**