

A. J. Meir

## Math 2650 - Linear Differential Equations

Fall 2007

Class Notes

1. As we cover material in class you should be reading your textbook, in particular I have covered sections 1.1, 1.2, 2.1–2.5.

2. Homework from these sections and problems you are responsible for:

- Sec. 1.1 (p. 6) Problems 1, 4, 7, 9, and 11.
- Sec. 1.2 (p. 19) Problems 1, 5, 8, 10, 12, 13\*, and 17.
- Sec. 2.1 (p. 37) Problems 1–4, 11, and 13–16.
- Sec. 2.2 (p. 52) Problems 2–7, 12, 13, 16, 17, and 31.
- Sec. 2.3 (p. 64) Problems 1–4, 11–13, 19, 20, and 25.
- Sec. 2.4 (p. 70) Problems 1–6, 11, 15, 16, and 17.
- Sec. 2.5 (p. 76) Problems 1–10, 14, 15, and 18.

3. Technology, you should now be familiar with Maple, you should have gone over the following worksheets

- <http://www.auburn.edu/~ajm/teaching/Math2650/lab1.mw>
- <http://www.auburn.edu/~ajm/teaching/Math2650/lab2.mw>
- <http://www.auburn.edu/~ajm/teaching/Math2650/lab3.mw>
- <http://www.auburn.edu/~ajm/teaching/Math2650/lab4a.mw>

For introduction to Maple see

- <http://www.auburn.edu/~ajm/teaching/Math2650/intro.mw>
- <http://www.auburn.edu/~ajm/teaching/Math2650/more.mw>
- <http://www.auburn.edu/~ajm/teaching/Math2650/morede.mw>

4. Test preparation, for test 1, on Tuesday, October 2, you should be able to solve first order linear d.e.s, separable first order d.e.s, understand direction fields, and isoclines, compartment problems, and equilibrium solution and their stability.