

Lab Procedures and Guidelines
Differential Equations with Linear Algebra, Math 3280

Fall Semester 2006

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Most lab work assigned will be performed with the help of the software package called *Mathematica*. *Mathematica* should be installed on the hard disk on all the full access Mac and PC labs on campus. .

You are strongly encouraged to do labs with a partner. If you do so, you should turn in only one lab for the pair. Both lab partners should be involved in all parts of the lab. **For example, one person doing the Mathematica session and another adding the comments is NOT acceptable.** Discussing and comparing results with your partner, other students, your TA, and your instructor are all encouraged, but copying Mathematica or Differential Systems sessions and/or results is, of course, unacceptable. The following statement should be true for all partners on any one lab, and all partners should sign the statement on the lab writeup: **I have contributed to this lab, read it in its final form, and understand all the stated results.**

Lab reports should be organized, neat and well-labelled and self contained. You should treat the writeup as an essay for a writing course. The report should make it clear what problems were being solved and what steps were taken to solve them. In particular, all lab reports should include the following, either typed with a word processor or written neatly by hand:

- A title page or section with your name(s), instructor name, TA name, Lab Title, Lab Number, and date
- A written introduction including a statement of the goal(s) of the lab
- A coherent description of the procedures used to solve the problem(s) in the lab. Questions asked as part of the lab should be clearly answered and labelled. It should be clear where each part of each problem begins and ends. Output from a software session by itself is almost never acceptable. Hardcopy output from *Mathematica* will typically be provided only as attachments which are referred to in the lab writeup. The output should be clearly labelled, including sufficient comments to make it clear to a person who is not a *Mathematica* expert what has been done.).
- A concluding paragraph which may include, for example, any of the following:
 - What you learned from the lab
 - How useful the software was in performing the lab
 - How the lab relates to any other aspect of the course
 - How useful the techniques used in lab might be in a “real life” problem

GRADING: Lab grading will take into account all of the above. Part of the grade will be based on how required “tasks” were performed. Part of the grade will be subjective, based on the general organization and presentation of the lab report. Grading shorthand to be used: Goals (G), Procedures (Proc), Mathematica tasks (Ma), Differential Systems tasks (DS), Conclusions (C), Presentation and Organization (P+O).