STUDENT LAB SYLLABUS   Em1 lab   Summer 08 "B" Session

WEB PAGE: http://www.math.fsu.edu/∼bellenot/class/su08/lalab

MEETING TIMES: MW 12:30-1:30 101 LOV

LAB INSTRUCTOR Dr Steven Bellenot

> OFFICE 223 Love
>
> LAB OFFICE HOURS W 2:00 in computer classroom 107 MCH
>
> OFFICE HOURS TRF 12:30-1:30 or by appointment
>
> EMAIL bellenot@math.fsu.edu
>
> WEB http://www.math.fsu.edu/∼bellenot
>
> OFFICE PHONE 644-7405

ELIGIBILITY: It is a part of MAP 3305.

TEXT: Schaum's Outline on Matrix Operations by R. Bronson,McGraw-Hill, 1988. (Less than $13 at amazon.com)

CALCULATOR: No calculators are allowed on the exam or quizzes.

COURSE OBJECTIVES: The purpose of this lab is to review matrix operations by use of the software Scilab and to introduce students to eigenvalues and eigenvectors.

ATTENDANCE: Attendance and class participation will be factors in determining the final grade. No food or drinks are allowed in the classroom. Please turn off cell phones and keep them hiden during class.

COMMUNICATION: It is your responsibility to register for a (free) FSU computer account so that I can send you email, which you are expected to check regularly. If you prefer to read your email elsewhere then you can arrange to have messages forwarded, but you must still obtain an FSU account in the first instance.

GRADING/EXAMS: There will be 2 tests and a collection of homeworks and small projects. Your grade will be based on how well you do on the tests (80%) and the homework and labs (20%) Emath1 students will have their lab grade included as part of their Emath1 grade.

EXAM POLICY: No makeup tests will be given. Late or unstapled assigments will not be normally be accepted. A missed test may be excused if the student presents sufficient verifiable evidence of extenuation circumstances. And unexcused absence from a test will be penalized. If a test absence is excused, then either a the next test, or at the instructors discretion, an oral test might be given. An unexcused missed assignment will result in a grade of zero. Absences from tests or missing assignments due to family social events will not be excused. Acceptable medical excuses must state explicitly that the student should be excused from class. Students must bring FSU ID cards to all tests.

HOMEWORK: Homework will consist of a few on-line homework problems per week. Most students will find that the amount of assigned homework is too small to provide enough practice to become proficient in the material. Please do additional problems as needed. The class web page has the (tentative) schedule for the semester.

COMPUTER ASSISTED INSTRUCTION: All computer assignments are due 5 pm; every effort will be made to ensure on-line hw problems are always available even after 5 pm. However, the time limits will not be changed, even if networks problems occur and the problems are not available.

HELP: Do not hesitate to come to my office hours, or to contact me via email. I check my email often, and give prompt replys to any emailed questions from my students. (Please – no html formated email, send text only. For files with graphics, I will look at PDF files but not word .doc files) All projects must be turn in in hard copy.

Details

- How I grade problems: There are several steps to solving a matrix or ode problem. One most understand the problem. One must select a method of solution which is not only correct but is efficient. One must execute the method and communicate its execution correctly. Finally the results must checked for reasonableness of your answer. Partial credit is awarded with these factors in mind relative to the difficulty of the problem. Adding $2+2$ and getting 5 in the course of a problem could result in a score of 0/10 if the problem was $2+2=?$, to getting 10/10 if it was a silly mistake at the end of a two page problem solution.

  Incorrect answers that are unreasonable are not given much partial credit. For example, the answer $(y-1)=2x(x-1)$ to the question what is the equation of the tangent line to $y=x^2$ at $x=1$ is unreasonable because lines have linear equations. Even though the error is a simple one, it is an error that should have been caught in the "is this answer reasonable phase". What must you check so your answer is reasonable? This is one of the best reasons to attend class, it is not in the text.

  Mathematics provides for many short calculations but correct communication requires sticking to mathematical rules. In particular, equations RHS = LHS should only be used when the RHS and the LHS are equal. For example, the following use of L'Hopital's rule contains two =-signs and neither is used correctly.
  $$\lim_{x \to \infty} \frac{x}{e^x} = \frac{1}{e^x} = 0$$
  The answer is wrong because of the missing limit operator for the middle expression. This kind of mistake is often caused by laziness rather than lack of understanding, or is it? It doesn't communicate understanding and so it does not deserve full credit.

  Most matrix problems are long. Sometimes students are required to use certain shortcuts. Failure to use the shortcut, will lower credit on the problem even when the longer method is used correctly. Thus choosing a correct but slow method can cost you both points on the given problem and can rob you of time needed for the other problems.

  Finally you need to show all your steps for full credit.

- Lab Format. Your **OWN** work, written in clear English. Neatly typed or writtin in ink on one side of standard 8.5 by 11 paper. Multiple pages must be stapled and **NOT** dog-eared or paper clipped. **Labs with a paper clip or with dog-eared pages will recieve a zero score.** Discussion about the lab or homework problems with other students or the professor is permissible and even encouraged, but the final output needs to be uniquely yours and not obtained be copying from anothers solution. All labs must be submitted in hardcopy. No electronic copies will be accepted. (But if you are having problems with graphics, I will look at a PDF file.)

- Honor code: A copy of the University Academic Honor Code can be found in the current Student Handbook. You are bound by this in all of your academic work. It is based on the premise that each student has the responsibility 1) to uphold the highest standards of academic integrity in the student's own work, 2) to refuse to tolerate violations of academic integrity in the University community, and 3) to foster a high sense of integrity and social responsibility on the part of the University community. You have successfully completed many mathematics courses and know that on a "test" you may not give or receive any help from a person or written material except as specifically designed acceptable. Out of class you are encouraged to work together on assignments but plagiarizing of the work of others or study manuals is academically dishonest.

- ADA statement: Students with disabilities needing academic accommodations should: 1) register with and provide documentation to the Student Disability Resource Center (SDRC); 2) bring a letter to the instructor from SDRC indicating you need academic accommodations. This should be done within the first week of class. This and other class materials are available in alternative format upon request.