PHYS2502 Mathematical Physics

This course covers material in Mathematics that you will need in your undergraduate physics courses. Although the emphasis is on the Mathematics, we will be discussing it in a physical context whenever possible.

| INSTRUCTOR: | Jim Napolitano Office Hours: Wed | email: tuf43817@temple.edu nesdays 1-3pm in SERC 416 or | by appointment |
|-------------|--|---|--------------------|
| GRADING: | Wesley Deeg | email: wesley.deeg@temple.edu | |
| ASSISTANT: | Jacob Shin | email: jacobshin@temple.edu | |
| WEB PAGE: | https://phys.cst.ten | nple.edu/~napolj/PHYS2502/ | |
| MEETINGS: | SERC 456 SERC 456 | Tue 9:30-10:50, Thu 9:30-10:50 Mon 14:00-16:50 | (Lecture) (Lab) |
| TEXTBOOK: | A Short Introduction to Mathematical Concepts in Physics | | |

The textbook is a manuscript I am preparing for publication next year. I will hand out hard copies of the draft as of December 2022. Any feedback you have on the manuscript would be greatly appreciated, including things you would like to see in the index.

Please see the course web page for additional information, including links for the following:

• Homework Assignments, due every Tuesday (except the first lecture), at the start of class.

 \circ Lab Assignments, due every Tuesday by 8:30am following the lab period. These are straightforward, and you should be able to complete them by the end of the lab period.

 \circ Links to information that you might find useful if you want to use LATEX for preparing homework solutions, or MATHEMATICA for solving the laboratory assignments.

Most Thursday classes will begin with a 15-minute quiz, for which you can use your book or other materials, but which you must complete on your own. I will post the quizzes and solutions on the course web page some time after the quiz is given. A final exam will be given at the assigned time during finals week.

GRADING POLICY

Your course grade will be determined by the homework (15%), labs (15%), quizzes (40%), and final exam (30%). Cutoffs for course grades A, B, and C are 90%, 80%, and 70%, respectively. I expect to make some use of "grade modifiers", that is \pm after the grade. I may make other adjustments to the overall grading scheme if there are special circumstances.

LEARNING OUTCOMES

I want you to become familiar with the Mathematics that is necessary for doing well in future Physics courses. I also hope to inspire you to take more courses in Mathematics.

ACADEMIC INTEGRITY STATEMENT

Put simply, don't copy someone else's homework, and don't cheat on the quizzes or final exam. If I suspect you of either, I will ask for an explanation. If your explanation is unsatisfactory, you will be given a grade of zero and reported to the College. If this happens more than once, you will be given an F for the course.