PHYSICS 142 Fall 2002

GENERAL INFORMATION

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Physics 142 Laboratory Instruction Manual

1. Course Calendar and Assignments

The course calendar and assignments are attached. We strongly suggest that you read the appropriate material before it is discussed in class. That way you will be able to focus on the things you do not understand at first and ask relevant questions. Remember that learning is an interactive process, the instructors will be only too happy to answer your questions in class, in the discussion sections or during office hours.

It is essential to realize from the outset that the material in this course cannot be mastered simply by rote learning of facts or equations. You must concentrate on understanding the underlying principles and their application. Mathematics is the language by which the ideas of physics are expressed. If you are not comfortable with the basics of calculus and vectors you should review them at the earliest possible time and/or ask for help.

2. Homework

The homework is an integral and essential part of the course. It is the method by which you get feedback on your comprehension of the material. It is therefore very important that you spend time working on understanding the problems. In case of difficulty, please contact the instructor, tutor, or laboratory TA for help. Working together in a group is often a useful way of tackling difficult problems.

The homework assignments are due on the Wednesday of the week following the assignment. They must be handed in at the end of the lecture. They should be clearly identified with your name and social security number, the course number, and the name of the instructor and grader. Homework handed in to the Physics Department office should have a cover sheet attached.

To obtain the maximum credit, please arrange your work neatly with carefully drawn diagrams and clear definitions of quantities. Answers should, of course, include units where appropriate.

Solutions to the homework problems will be posted in the course web page at the end of the week following the due date.
3. Laboratory

The laboratory is also an integral part of the course. Physics is an experimental science and the laboratory work will give you insight into the phenomena that are discussed in class. Attendance at all laboratory meetings and submission of completed laboratory reports is mandatory. It will not be possible to pass the course without successful completion of the laboratory requirement.

Laboratory experiments are intended to reinforce the course material. However, it is possible that the required topics may not yet have been adequately covered in class. Nevertheless, it is your responsibility to read the textbook and be familiar with the necessary material. Obviously, the instructions should be read before you do the experiments.

As described in the Physics 142 Laboratory Instruction Booklet, the reports for Experiments 1, 2a, 3, 5, 7 and 9 are informal. The data, calculations and discussion are to be entered on the sheets at the back of the booklet. These informal reports are due at the end of the session.

Experiments 2b, 4, 6, and 8 require more formal reports in the format described on pages 6 and 7 of the booklet. These write-ups are due one week after completion (or at the next lab session) and should be handed in to your lab TA.

4. Examinations

Three examinations will be given during the course of the semester. Mid-term examinations are tentatively scheduled during the weeks of Sep 30th and Nov 4th respectively. These dates and times will be confirmed later. The third examination will be given during finals week at a time to be scheduled later. It is your responsibility to be available for all examinations.

5. Grades

The final score for the course will be determined according to the following proportions:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>First Examination</td>
<td>25%</td>
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<tr>
<td>Second Examination</td>
<td>30%</td>
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<tr>
<td>Third Examination</td>
<td>30%</td>
</tr>
<tr>
<td>Laboratory</td>
<td>10%</td>
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<tr>
<td>Homework</td>
<td>5%</td>
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6. Withdrawal

According to the University Regulations, the last day to drop a course without penalty is Friday Sep 6th.