Student Information – Introductory Physics 236/241/261 Labs

Supervisors

Prof. Dan Amidei
358 West Hall
764-3266
amidei@umich.edu

Faculty Supervisor: Overall course organization; curriculum revisions and development.

Dennis Allen
1241 Randall Lab
764-3468
bapple@umich.edu

Lab Supervisor: Day to day lab problems; Make-up labs, lab equipment setup.

Brandon Erickson
3241 Randall Lab
763-7525
bmse@umich.edu

Lead GSI: Assists and monitors GSIs; computers and software; covers GSI absences.

Lab upgrades

We are currently in the process of revising the curriculum in the 236/241 labs. Because of this, you may find your assignment in lab does not strictly follow the manual. As we implement new material, you may be asked to perform experiments not found in the manual. This is an ongoing project and we welcome your comments on old and new material. If you find errors or ambiguous material in the lab manuals please bring these to the attention of your instructor so we can correct or modify the manuals as needed.

Coordination with Lectures

Owing to the pace and structure of the spring term, it is not possible to synchronize all the labs with the lectures. In addition, each lecturer has a somewhat different sequence of topics (and textbook), which always varies from one semester to another. On occasion, the lab experiments may involve a topic that has not yet been covered in lecture—it will be your responsibility to read ahead in your physics textbook at those times. Appropriate background reading is listed in the manual for each chapter; also, the sections labeled Theory in your lab manual will be helpful.

Required Materials

In addition to the lab manual, you should bring a calculator with trigonometric and logarithmic functions to class.

Lab Window

The lab window is located at 1241 Randall Lab (just inside the south entrance under the archway) and is the office for the lab supervisor. The lab supervisor is responsible for maintaining lab equipment, handling day-to-day problems, and scheduling makeups. If you have problems or concerns with the course or your GSI, you should go to the lab window and speak with the lab supervisor (or contact the faculty supervisors, listed on the first page).
Help Room and SLC

We have assigned (and staffed) a physics "help" room in 1416 Randall. This room will be available for assistance with both physics lecture and laboratory work. In addition, your GSI's office hours will be held there. For hours and staffing see:

http://helproom.physics.lsa.umich.edu/

Likewise, selected physics-related tutorial software has been introduced at the Labs’ website and at the Science Learning Center (SLC), located at 1720 Chemistry Building. Check the SLC during the semester for the nature and availability of this material. Much of it is extensive, interactive physics tutorials on CD-ROMs. For information on the SLC, see:

http://www.lsa.umich.edu/slc/

Introductory Labs Website

Copies of the current 236/241/261 syllabi and other helpful resources can be found at the Introductory Labs Website and our CTools site:

http://instructor.physics.lsa.umich.edu/ip-labs/
http://ctools.umich.edu

Lab Grading Policy

Your grade will consist of four basic components. The lab grade is the total score you achieve on the worksheets that you complete and submit in class each week. The quiz grade is determined by your performance on the pre-lab quizzes (see below). The in-class grade will be determined by your prompt arrival for lab and your behavior during the lab (arriving late, disrupting class, or failing to contribute to the work handed in by your partnership will reduce your grade). The fraction of your total grade represented by each of these components is:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Work</td>
<td>75%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>15%</td>
</tr>
<tr>
<td>In-Class</td>
<td>10%</td>
</tr>
</tbody>
</table>

Grades will be given in the lab courses based on the following scale:

<table>
<thead>
<tr>
<th>Total Percentage Achieved</th>
<th>Grade Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>92 – 100%</td>
<td>A+ / A / A-</td>
</tr>
<tr>
<td>85 – 92%</td>
<td>B+ / B / B-</td>
</tr>
<tr>
<td>75 – 85%</td>
<td>C+ / C / C-</td>
</tr>
<tr>
<td>&lt; 75%</td>
<td>D</td>
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</tbody>
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A failing grade (E) will be assigned to students who miss two or more labs without a valid excuse.
**Partners and Worksheets**

Each week, you will be partnered with another student. You and your partner will complete a single worksheet for that week’s experiment (to be turned in at the end of class) for which you will receive the same grade. Both partners are expected to contribute evenly to the completion of the experiment and worksheet. You will switch partners several times during the term. If your section has an odd number of students, you should not work in a group of three more than once.

Occasionally, instructions on the worksheets may differ from that of the manual; in this case, follow the worksheets.

**Pre-lab Quizzes**

At the beginning of each laboratory, you will be required to complete a closed-book 5-minute quiz. Note that you are responsible for lecture material up to the time of the lab; if you took the lecture in a previous term, you may need to go back and review some key concepts. If the lab is ahead of lecture, then you need to read ahead in your textbook. The quizzes are intended to ensure that you are adequately prepared before coming to class. They are mainly based upon the laboratory manual chapter for that week’s experiment, but may occasionally test your understanding of the physics concepts as well. These quizzes should not be difficult if you have carefully read the laboratory manual.

The quizzes will start exactly at 10 minutes after the hour. There are no make-ups for the quizzes, and you will lose precious time if you show up late. There will be a quiz during each lab session, including the first lab. The lowest quiz will be dropped.

**Attendance and In-Lab Performance**

Evaluation of in-lab performance is somewhat subjective. This portion of your grade will depend on your attendance both physically and mentally. You are expected to be in class on time each week—absences or tardiness will adversely affect your grade. While in class, your attention should be focused on your lab tasks—not, for example, on your cell phone. You are expected to come to class prepared and work efficiently until you and your partner have completed the assignment.

Missed labs must be made up to receive credit. However, make-ups are generally allowed only for medical reasons or otherwise unavoidable conflicts (scheduling a lab in known conflict with an exam scheduled in the course bulletin is not an unavoidable conflict) and you should be able to supply adequate documentation as to the reason. If you must miss a class for illness, you must to supply documentation. In the event that you must miss a class, notify your instructor as soon as possible - notifying your instructor before class is ideal. You will need your instructor’s permission for the makeup and you are responsible for scheduling it—the lab equipment for a given experiment will generally be available for make-ups through the week following the last scheduled sessions for that particular experiment. If you are granted permission to do a make-up, but delay more than a week in scheduling the make-up, you will not be allowed to do the make-up. Get a lab makeup slip at the supply window (1241 Randall), have the instructor sign it, and bring it back to the window to schedule the makeup.

**Note:** The only way to acquire permission for a make-up lab is through the lab supervisor’s make-up slips. Electronic correspondence will not suffice. Also, even if you receive permission from your instructor, if you do not schedule your make-up and receive permission from the lab manager within a week of the experiment, you will not be allowed to do one.