

Student Information – Introductory Physics 128/241 Labs

Supervisors

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

Dennis Allen
1241 Randall Lab
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Lab Supervisor: Day to day lab problems;
lab equipment setup.

Brandon Erickson
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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 128/241 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 fewer weeks that the labs are in session, 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 128/241/261 syllabi and other helpful resources such as tips on experiments and interactive computer simulations of lab experiments 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. A formal lab report will be required for one of the experiments. The quiz grade is determined by your performance on the pre-lab online 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:

Lab Work	Formal Report	Quizzes	In-Class
55%	20%	15%	10%

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

Total Percentage Achieved	Grade Range
92 – 100%	A+ / A / A-
85 – 92%	B+ / B / B-
75 – 85%	C+ / C / C-
< 75%	D

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. You should not work with the same partner for more than one rotation. 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.

***NB:** The exception to this is Experiment 6, where you will complete a worksheet individually, as well as a formal report (see below).

Formal Reports

Part of the course grade will be based upon a formal report, which can be very time consuming to write. A good lab report generally will be *concise* (no more than 5 to 10 pages **including** graphs and tables), yet it will contain all the information necessary for your GSI to understand the extent of your work. *A very long report generally indicates that you don't have a clear idea of what you are doing or why you are doing it.*

The requirements and guidelines for the formal report will be given to you when the report is assigned.

Each student must write his or her own formal report. Partners may help each other in figuring out the data analysis, but all writing and final analysis must be done individually. Using someone else's words constitutes plagiarism and is a serious offense (see UM's guidelines on plagiarism).

Pre-lab Quizzes

Prior to each lab, you will be required to complete an online quiz. These quizzes are intended to ensure that you are adequately prepared before coming to class. They are mainly based upon the 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 manual.

The online quizzes are administered through the LSA Student Assignment Management system (SAMs) and can be accessed by a link from the course website or found at:

<http://sams.lsa.umich.edu/>

The quiz for each week will become available one week prior to class and **must be completed by midnight the evening before class**. The SAMs server will not accept any submissions after this time—that means you must not only access the quiz, but also *complete* it by this time. Note the SAMs server is synced to an official time server and will use the correct time, regardless of the time setting on the computer used to take the quiz (you will not be excused if you fail to complete your quiz because your computer was not set to the correct time). You are responsible for ensuring that you have adequate time and internet access for completing these quizzes. Leave sufficient time so that, if a technical problem arises, you and your GSI can determine an alternative for taking the quiz—**quizzes will *not* be excused due to last**

minute technical problems (e.g. lost internet connection). Since the quizzes are intended to ensure you are adequately prepared for class, **there will be no extensions or makeups**; all questions about the quizzes must be brought to your GSI's attention *before* the quizzes are due. If you have a concern about a quiz question *after* the quizzes are due, please bring it to the attention of the Lead GSI. Any such concerns must be raised before 22 June 2009.

On the SAMS system, the quizzes will be listed by chapter number (except for two week labs – the second quiz for the lab will be numbered differently). **Note that chapters may not be done in order, so be sure you are accessing the correct quiz.** There will be an additional quiz for the formal report requirements, called Set 49 – do not miss it! If you are confused about the numbering of the quizzes, please contact the Lead GSI.

At the end of the semester, your lowest quiz score 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. However, we do not encourage you to come to class if you have the flu or other communicable sicknesses. If you miss class once for this reason, it is not necessary to supply documentation, but in the event that you miss a second lab for sickness, you will need to provide documentation. In the event that you must miss a class, notify your instructor as soon as possible. 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*. 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.

Academic Integrity

Cheating and other academic misconduct will not be tolerated. This includes falsifying data as well as copying the work of others. Examples of academic misconduct and procedures for handling misconduct can be found by going to:

<http://www.lsa.umich.edu/lsa/facultystaff/saa/>

and following the link for “Academic Judiciary Manual of Procedures” (at the center of the page, towards the bottom).