Objective

The primary purpose of laboratory sessions is to reinforce concepts presented in the lectures. However, laboratory experiences also expose students to many practical issues encountered in the design and construction of circuits, including package geometry, weight, temperature effects, limited availability of devices, and so forth. In addition, the laboratory serves as a forum in which to introduce professional practices such as organizing and presenting results. These secondary purposes will therefore factor heavily into your overall laboratory grade.

Lab Meetings

Attendance at laboratory sessions is mandatory at the time appearing on your class schedule. Sessions will meet each week of the semester during which classes are in session on both Monday and Wednesday. Thus, lab will not meet on Aug. 22 (first week of classes), Oct. 8 and 10 (week of Fall Recess), Nov. 19 and 21 (week of Thanksgiving Recess), and Dec. 3 and 5 (last week of classes). An unexcused absence will result in a lab grade of zero for that week.

Handouts

Each week a handout will be posted at the course web site outlining the activities scheduled for the upcoming lab session. You should read the handout as soon as possible since preparatory work will be required for most lab exercises. The handouts usually contain important background information, and you will save a considerable amount of time in the lab if you are prepared for it.

Pre-Laboratory Exercises and Quizzes

Preparatory work in the form of a preliminary design or assigned readings will usually be required for the lab exercises. Short quizzes might be given at the beginning of lab sessions to check your preparation. If a quiz is scheduled, it will be announced well in advance. The preparatory work and/or quizzes will be incorporated into the grade for that week’s lab session.

Grading

The laboratory component comprises 20% of the overall course grade for ELEC 350. A lab grade will be assigned each week based on preparatory work, the performance of that week’s lab exercise, and some type of written report. Grading criteria will vary from week to week, depending on the nature of the activity, but will always be stated clearly in the lab handout.

Lab reports will serve as opportunities for you to gain experience with professional technical communication. Consequently, your written work will be held to different and perhaps higher standards than you might have been used to in the past. It is likely that you will need an adjustment period; therefore, the lab grades will be weighted as follows (for a total of 20%) [Amended Nov. 25, 2012 because of canceled lab due to weather and because of inadvertent neglect of individual assessment assignments at end of semester]:

| Labs 1-4 | 0.8% each | (four labs) |
| Labs 5-11 | 2.8% each | (six out of seven labs) |
Note that you will receive only one group grade for the last two lab exercises because you will write an individual report for one of those labs.

This system will allow you to learn from the feedback you receive and will give greater weight to your improving written work. No grades will be dropped in determining the final lab average. In most cases only one report will be required per lab group, and it will usually be due a few days after the lab exercise. The last two reports of the semester will be used for assessing your technical communication skills and must therefore be written by only one member of each lab group.

[Added Nov. 25, 2012:] Your final lab grade for the semester will be the higher of:

- the average score for the ten group grades of the semester weighted according to the percentages given above, or
- the grade you receive for the individually written report used for assessment at the end of the semester.

Reports submitted after the deadline will have the following grade deductions applied:

<table>
<thead>
<tr>
<th>Time Late</th>
<th>Grade Deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1 hour late</td>
<td>10%</td>
</tr>
<tr>
<td>1-24 hours late</td>
<td>20%</td>
</tr>
<tr>
<td>24-48 hours late</td>
<td>50%</td>
</tr>
<tr>
<td>&gt; 48 hours late</td>
<td>no credit</td>
</tr>
</tbody>
</table>

Copying of another group’s written work or test procedures is considered plagiarism and is not acceptable. Violations of the University’s academic responsibility policy will be referred to the Board of Review.

Any student who leaves a lab session without prior permission before his/her group is finished with their work will receive a 20% grade penalty for that session. Because your lab partner(s) depends on your presence, significant lateness to a session will result in a grade reduction proportional to the amount of time missed, quantized in 10% increments. A missed quiz due to lateness will result in a grade of zero for the quiz. If you know you will have to miss an upcoming lab for a valid reason and you wish your absence to be excused, you must notify the lab instructor at least 48 hours in advance.

Lab Reports

Lab reports will be expected to be of high quality and professional in style. The primary purpose of a lab report (or any report, for that matter) is to communicate technical information accurately, clearly, and concisely. Therefore, you should prepare your reports with considerable care. The presentation of information should be well organized and should flow in a logical fashion. Tables and plots should be professionally formatted and should be clearly linked (usually via figure/table numbers and captions) to explanatory text. There should be no grammatical errors, and colloquial and unsophisticated language and jargon should be avoided. A more detailed set of guidelines for preparing reports will be posted at the lab web site.

Cover sheets are not required for reports, but the names of all lab partners, the lab section (Monday or Wednesday), the course number (ELEC 350), the lab number, and the lab date (not the report due date) should appear on the first page.

Finally, it is absolutely vital that you properly credit others’ intellectual property (including any diagrams and/or text copied from lab handouts).
Lab Notebook

You are not required to maintain a formal laboratory notebook for this course. However, doing so is highly recommended to help you organize and keep track of recorded data, test procedures, and results. A record of lessons learned in the lab might help you considerably as you study for exams and as you prepare for subsequent lab exercises.

Web Site

Most of the handouts, instructions, and other resources for the lab sessions will be available at the following site:

http://www.facstaff.bucknell.edu/dkelley/elec350/lab/lab.html