Physics 232 Laboratory
Syllabus for 232005 and 232006, Spring 2010 Semester
Lab Instructor: Brian Williams, bwilli38@utk.edu
232006 12:20p-2:15p Room 508
232005  4:40p-6:35p Room 508

<table>
<thead>
<tr>
<th>Dates (Tuesdays)</th>
<th>Experiment</th>
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<th>Experiment</th>
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<tr>
<td>Jan 26</td>
<td>Simple Harmonic Motion</td>
<td>March 16</td>
<td>Diffraction</td>
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<td>Feb 2</td>
<td>Standing Waves</td>
<td>March 23</td>
<td>Photoelectric Effect</td>
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<td>Feb 9</td>
<td>Refraction</td>
<td>March 30</td>
<td>Balmer Series</td>
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<td>Feb 16</td>
<td>Speed of Light</td>
<td>April 6</td>
<td>Poisson Statistics</td>
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<td>Feb 23</td>
<td>Simple Lenses</td>
<td>April 13</td>
<td>Attenuation of Radiation</td>
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<td>March 2</td>
<td>Optical Instruments</td>
<td>April 20</td>
<td>Halflife of Ba-137m</td>
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<td>March 9</td>
<td>SPRING BREAK!</td>
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<td>END OF LAB</td>
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**Grading**
There will be 12 labs. The lowest lab grade will be dropped. This can also account for any one missed lab. Therefore, there will be no make-up lab. Your total grade will solely depend on your lab reports. There will be NO FINAL.

**Lab Time Interchange**
I instruct both the 12:20p and 4:40p labs for 232. If you can't make your allotted lab time slot for a day in the FUTURE, contact me regarding possibly attending my other section, if space is available.

**Office Hours**
My office hours will be in the tutoring center on the second floor 2:20p-3:30p on Tuesdays.

**Reading:**
Read the theory and method sections of your lab (once) before coming to class.

**Lab Data:**
A data worksheet will be completed during the laboratory session. This will record all data measured or taken during the lab which will be used in the lab report. If I post data worksheet templates they will be available at:

[http://sites.google.com/site/232lab/labs](http://sites.google.com/site/232lab/labs)

**Lab Report Format:**
The lab is worth a total of 10 points, 7 points for the lab report and 3 points for lab work (attendance and performance). The lab report should include sections:

**Title:**
Experiment Name(s), your name, partner's name, Lab 232, Section Number, and Date of Experiment.

**Purpose and Method (2 points):**
In this section include a short summary on the experiment including what the setup is, what measurements were taken, what relationships were observed, and any theoretical equations or laws which might relate.

**Conclusion and Results with Error Analysis (2 points):**
In this section include the end results of your experiment. Include whether or not theoretical laws appeared to hold true, your own results versus theoretical predictions, and error analysis (e.g. percent difference).

**Questions/Problems (3 points):**
Unless otherwise noted answer all questions/problems at the end of the lab guide.

**Attachments:**
Attach data worksheets and worked problems/questions. If a problem requires hand-written work, you must attach this to your report. Do not just give me the answer.