

**University of Waterloo
Department of Physics**

To: All Physics 122L/132L Instructors

From: Jeff Gardiner (Rm 260, x33545)

Re: Duties, Responsibilities and General Information regarding the Lab.

- You are **expected** to do the experiments yourself prior to the lab period if you have not already done so. This provides you with your own set of representative data and allows you to accurately and fairly evaluate student efforts. REMEMBER, you are on the front line when it come to giving the students a good impression of the Physics department and of physics in general. Adequate preparation is essential to this end.
- Try to get to the lab 10 to 15 minutes early to check out the condition of the lab and tidy it up as necessary, collect your thoughts on what you'll say about the experiment in your introduction, and put any additional pertinent information on the blackboard. (A great time saver.)
- Remember to introduce yourself during the first lab and tell the student your office location should they wish to get assistance outside of the lab period.
- Your introduction to the experiment should be **brief** and should normally last no more than 20 mins. It should include a brief reference to the background theory if required, suggestions on the efficient use of the equipment, techniques for taking measurements and estimation of errors. Usually, elaborate error analysis is restricted to a time permitting basis but all basic measurements should be recorded with an appropriate uncertainty.
- During the lab period, **make sure you interact** with the students. Avoid just sitting at the front desk. Convey to them that you are approachable, should they encounter problems. A watchful interaction often allows you to see students doing things incorrectly and allows you to rectify their technique so as to avoid having them repeat basic measurements.
- The report is due at the end of the three hour period, and a tight reign should be kept on significant extensions beyond the three hour period. **Brief** extensions beyond the 3 hour period are at your discretion and should only be announced in the remaining few minutes of the official lab period. Don't give the students the impression that there will always be extra time!
- During the lab, discourage students from borrowing apparatus from neighboring stations unless absolutely necessary. Generally, all stations have all the necessary apparatus and when equipment is borrowed, it usually is never returned to its proper location.

- Normally it is the students responsibility to clean up their work area before they leave and you should make them aware of this. If they fail to do this it is your job! **The lab room should always be left in a neat and orderly fashion. Do Not leave a mess for the next instructor.**
- When through, make sure the lab door(s) are locked and secured shut. All pocketable items such as micrometers, vernier calipers, etc. should be collected up before any students leave the laboratory. Do this yourself towards the end of the lab period, so as to ensure that none of these items go “missing”.
- Lab reports should be marked before and handed back at the next lab period. Discuss any common shortcomings with the reports during your brief introduction. **Mark the reports out of 20.** In marking your reports try to keep your average in the 14 to 16 out of 20 range, unless circumstances prevent this. Marks of 20/20 should be as rare as those of 10/20. There will be occasions of course when such “extreme” marks are deserved. Remember that student marks can be greatly affected by the amount of assistance they receive, so don’t give it all away! The labs are to be thought of as a bit of a TEST in which “reasonable” assistance from the lab instructor is permitted. Don’t be too fussy in looking for areas to deduct marks. Try to be FAIR and CONSISTENT in your marking. You should be able to defend any assigned report mark and if you can’t, be prepared to change it. If evaluation of report efforts appears to be a problem, see me for assistance. Send reports to me for a final decision if a dispute over a report mark can not be resolved between you and the student(s).
- Blank grade lists are provided for each section. **Don’t lose these sheets!** Inform the students they should not throw out any of their marked reports until the final grades for the course have been issued. Any students in your section who are not on the official list provided should be added, make sure you copy down their correct surname and ID number. Marks should be entered **regularly**, into the marker database. See me for information regarding the use of this program. Any student who you can’t find in the database should be noted, and direct this information to me so it can be rectified.
- Please bring any and all problems regarding equipment malfunction, shortages, breakage or theft, to my attention as soon as possible.