
Grading Procedures:

Experiments will be graded on advanced planning, accuracy, compliance with safety regulations, record keeping and time management. The following breakdown shows how the final grade will be computed:

Experiment 650 points
Midterm exam 175 points
Final exam 175 points

Attendance:

You are expected to attend every lab session. Attendance will be taken in each lab period. You are not allowed to be absent from more than one lab session without bringing a note from a physician. There will be no make-up of any missed lab. For 3 or more missed labs, the course will be graded with an “F”.

Write-up:

A notebook with numbered pages is required for the in-class work. Data collected in the lab, notes, jottings, etc. will be done on it and will be presented to the instructor (who will sign them) before you leave the lab. You also need a folder containing (at all times) the reports for all the experiments. All the reports have to be typed. The first two pages should be this hand-out and syllabus. Lab reports are due on the first day of the following week (after the experiment was
conducted). Five points will be deducted for each day thereafter. Reports will not be accepted beyond the week they were due.

**The lab report** is an important part of the experiment and of the grade. It needs to contain:

- the complete title of the experiment
- the principle, method, instrument used
- the chemical reaction (if applicable)
- the step-wise procedure
- the results shown in tables. How the results were calculated will be shown (above or under the table) only for one of the samples
- statistical analysis (if more than one sample was analyzed)
- discussion/conclusions. Since this section may be more difficult to write, here are some suggestions.

**Discussion**

In this section the student describes the results of the experiment (calculations, observations, error analysis etc.) and discusses any important findings (such as, the density of a metal unknown matching the density from a given list of possibilities). Here are some suggested questions the student might think about. Always remember the **KISS** principle (keep it simple student) when writing up the lab discussion. Too little written suggests not caring or understanding the lab report, too much written looks like trying to bluff your way through. Include:

What was the experiment about?
What was(were) the result(s)?
How do these results compare with known values?
Would the results have been closer with better equipment, better preparation on the student’s part, performing the experiment more carefully, etc.?

**Do not forget: technical reports (and lab reports qualify as such) are written in an impersonal style (3rd person, passive voice)!**

**Cheating:** Will not be tolerated. Consult the University’s policy concerning academic honesty and make sure you abide by it.

**Letter Grades**
> 900 A
870 - 899 A-
840 - 869 B+
810 - 839 B
780 - 809 B-
740 - 779 C+
700 - 739 C
650 - 699 C-
600 - 649 D
Experiments

1. Separation of nitrophenols
2. Hydrolysis of an aromatic ester
3. Ultraviolet spectroscopy
4. Infrared spectroscopy
5. Nuclear magnetic resonance
6. Midterm exam (spectroscopy)
7. Aldehyde synthesis
8. Nitrile hydrolysis
9. Synthesis of an ester
10. Aldol condensation
11. Saponification
12. Carbohydrate reactions
13. Carbohydrate esterification
14. Analysis of a tripeptide by chromatography
15. Final exam
   Check-out