

1.5 GRADING

There will be four required experiments in 5.311. Questions regarding experimental procedures, data interpretation, grades, etc. which a TA cannot answer should be directed to a faculty member or to Dr. Gheorghiu.

<u>Experiment</u>	<u>Lab periods</u>
Exp. #1. Kinetics	4
Exp. #2. NMR	4
Exp. #3. Unknown Carboxylic Acid	5
Exp. #4. Ferrocene	5

INFORMATION PERTAINING TO EXPERIMENTAL PROCEDURES

Exp. #1	Kinetics:	Students work in PAIRS
Exp. #2	NMR:	Students work in PAIRS
Exp. #3	Unknown Carboxylic Acid	completed INDEPENDENTLY
Exp. #4	Ferrocene	Students work in PAIRS

At check-in time, attempts will be made to assign adjacent desks to those who have selected lab partners. Alternatively, you will be assigned a lab partner for this experiment.

Laboratory reports are due on the dates indicated on the schedule. All written reports, including the last one, must be turned in by **Wednesday, November 24** in order to get a grade in the subject.

- **Reports should be turned in to the Undergraduate Laboratories, across Room 4-452. Reports must be handed any time during 1:00 P.M. and 1:10 P.M. of the due date, otherwise they are considered late (for example, a Report turned in at 1:11 P.M. is one day late).**
- **Lateness is penalized by loss of $3n-1$ grade points (n is the number of working days, not counting weekend days).**
- **PLACE A GRADE SHEET ON EACH REPORT (available in this manual). Missing Grade Sheet is penalized with 2 points.**

Grading policy for Fall 2004:

$$\begin{array}{rcc} \text{Final Grade} & = & \text{Sum of the Experiments Grade} \\ (\text{max. 400}) & & (\text{max. 400}) \end{array}$$

A. Experiment Grade:

- | | |
|--|------------------|
| (a) Lab quiz (Closed-book; ~ 15 min) | 15 points |
| There will be a closed book Quiz (15 min.) in the laboratory on the third day of each experiment. | |
| (b) Pre-lab preparation | 10 points |
| It is essential that you have reviewed the experiment and recorded in your lab notebook all the necessary information required to perform the experiment without consultation of the Manual. | |
| (c) The factual record | 20 points |
| Data, procedure signed and dated. It is important to develop good habits in keeping a notebook. | |
| (d) The Staff's assessment of technique, department, safety, etc. | 5 points |
| (e) Lab Report and Results | <u>50 points</u> |
| Total 100 points/experiment | |

The major part of the grade for the Lab Report is based on the analysis, interpretation and quality of the results, as well as the calculations, graphs, and the discussion sections. The Lab Report should demonstrate what you learned from the experiment and your ability to interpret and explain your experimental results. No grade for an experiment will be given unless the laboratory report is turned in.

A. Grading Laboratory Quizzes.

There will be four lab quizzes during the semester. The quizzes will be given in the laboratory, on the third day of each scheduled laboratory. Lab quiz dates are indicated on the Laboratory Schedule in Section III.

IF you fail TO TAKE A LAB QUIZ, SCHEDULE ONE AS SOON AS POSSIBLE with your TA. A missed LAB QUIZ must BE MADE UP within TEN CALENDAR DAYS after the date of the QUIZ.

B. Grading Notebooks and Reports:

Notebooks and reports will be graded by the TA responsible for that experiment. Your TA should discuss the comments and evaluations with you. Questions, suggestions, comments, and complaints not being handled by the TA's should be directed to Dr. Gheorghiu and/or the faculty member in-charge.

All categories listed above will be considered in grading, but the relative weight will depend on the nature of the experiment. Your final grade for each experiment will be based on:

- (1) Results: accuracy, yield, unknown identification.
- (2) Data Analysis: correct manipulation of data, error analysis, sample calculations.
- (3) Technique: efficient use of time, independence, experimental expertise.
- (4) Notebook report: organization, comprehension, completeness, lack of extraneous or irrelevant entries.

Each experiment will be graded on the basis of quality of the laboratory work and the write-up. Grading will be conducted by the TA assigned to the particular experiment. Grade sheets indicating the criteria applied in evaluating the laboratory work will be provided for each experiment. The aggregate of the experiments and the staff's evaluation will be the basis of the overall grade for the course.

IMPORTANT NOTE:

All experimental reports which have been graded are returned to you with a date stamped on the grade sheet. Please take the time to check the total score, and to look at the notes made by the TAs who have given you your score.

You have SEVEN (7) Calendar Days from the TA grading due date to request any review of the grading of your report. Also, after seven days from TA grading due date, no report will be accepted for change of an incorrectly added score, or any requested re-evaluation.

It is your responsibility to take the time to promptly look over each report when it is returned to you.

C. Grading Laboratory Techniques

These are guidelines for evaluating laboratory techniques for the students. All lab technique is 5 % of the Experiment grade. The TA will keep record of:

1. Student is able to follow instructions.
2. He/she wears goggles and observes lab safety.
3. Students arrive in laboratory on time.
4. Student is able to complete experimental work and leave the lab on time at 5:00 p.m.
5. He/she handles balances and other instruments with care.

6. Student comes to the laboratory well prepared, having read the experiment in the lab manual.

It is forbidden to use the text of the experiments from the Lab Manual during your work! You are permitted to bring only the Appendices.

The only source permitted to examine during the time you carry out the experiment are your pre-lab notes.

7. Work in lab is planned and well organized.
8. Works well with the lab partner and is cooperative with others in the lab.
9. Student is able to work independently.
10. He/she asks good questions.