

COMPREHENSIVE ORGANIC CHEMISTRY I LAB SCHEDULE

CHMO-335

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LAB OBJECTIVES: This lab course aims to accomplish the following objectives with respect to your chemistry education and experience:

- train you to keep a professional lab notebook
- train you in standard lab safety protocols
- build your confidence in running lab standard organic techniques
- build your confidence in the analysis and assessment of your experimental results
- hone your troubleshooting skills

ATTENDANCE POLICY: Students are required to attend each lab session. Any lab not completed will have to be made up during the allowed make-up period; otherwise you will receive a zero for that lab. Any student who misses more than one lab in either half of the semester will receive a zero for any additional labs.

LABORATORY NOTEBOOKS AND PROOFS: Each student must have a lab notebook. The notebook may be one with carbonless copy-through pages or a bound composition notebook. If a non-carbon copy notebook is used, a copy of your notebook pages will need to be turned in as their proof. All entries must be in ink. Please format your notebook as shown on page 2 of this syllabus.

NOTE: Everyone must complete an individual proof for each lab.

FINAL LAB PROOF DUE DATES: Your final lab proof is due in lab one week after the experiment has been completed. Proofs will NOT be accepted after the due date without a documented excuse. The only exception to this is make-up labs. Completed lab proofs should be turned in at the beginning of the following week's lab.

GRADES: Each completed proof and the practical will count equally toward your final grade. Missing proofs will count as a zero. At the end of the semester, final grades will be assigned based on the following scale:

A	> 93	A-	90 – 92		
B+	87 – 89	B	84 – 86	B-	80 – 83
C+	77 – 79	C	74 – 76	C-	70 – 73
D	60 – 69	F	below 60		

This scale may be adjusted (to the benefit of the student) at the end of the term.

GRADING SCHEME

I. Workbook (5 PTS)

II. Lab Proof Notebook Set-up

A. TITLE OF EXPERIMENT/TECHNIQUE (1 PT)

B. DATE (1 PT) – mm/dd/yy

C. SET-UP AND NOTES (5 PTS)

D. PROCEDURE/OBSERVATIONS (10 PTS)

- Written DESCRIPTIVELY in 3rd person, PAST-TENSE! The procedure should be written up as you do the experiment. Write the procedure in such a way that if your friend needed to do the lab and didn't have their text, he/she could use your procedure and do the experiment with little help from the instructor (think about the FACE demonstration).

E. DATA (8 PTS) - yield, % yield, recovery, % recovery, tables, graphs, color, phase, melting points, R_f values, boiling points, etc.

F. CONCLUSIONS/ANALYSIS (8 PTS) - Guidelines on how to write your conclusions are provided each week. Some good things to think about when doing each experiment are:

G. POST-LAB QUESTIONS (variable)

GRADING: Although the number of points for each lab proof may vary, each lab proof will be weighted evenly and your final grade will thus be an average of each proof percentage.

ACADEMIC HONESTY: It is expected that each student will individually write a lab report for all of the 12 labs. You are welcome to work on analyzing your data together, but everybody must write their own reports. Any plagiarism found in a report will result in a grade of zero for that report. You must physically perform each experiment and write a report for each experiment in order to receive a passing grade for this course (this means you cannot hand in lab reports for experiments you did not perform this semester). Handing in a lab report for an experiment you did not perform will result in an automatic zero for that report and referral to Dr. Heagy for further disciplinary action.

LAB RULES:

- Every student MUST have a bound lab notebook. Notebooks with carbon paper between pages are best.
- Every student MUST be on time. Extra time will NOT be taken to explain something to a student that has come in late. Tardiness will be noted.
- Late lab reports WILL be penalized.
- Labs start ON TIME and will NOT run over.

Experiment Schedule

Week	Week of	REActivities (manual reference, reading assignment)	Note
1	1/10	First Day of Lab	<i>Dry lab – No lab coat necessary</i>
2	1/17	<i>Martin Luther King Jr. Day Monday – No labs this week</i>	
3	1/24	Recrystallization/Melting Point	
4	1/31	Solvent Pair Recrystallization	
5	2/7	Thin Layer Chromatography	
6	2/14	Column Chromatography	
7	2/21	Stereochemistry	<i>Dry lab – No lab coat necessary</i>
8	2/28	Distillation	
9	3/7	<i>Spring Break – No labs this week</i>	
10	3/14	SN1/SN2	
11	3/21	Extraction I	
12	3/28	Extraction II	
13	4/4	NMR/IR	<i>Dry lab – No lab coat necessary</i>
14	4/11	Make-ups/Check Out	
15	4/18	Practical	
Finals	4/25	<i>Finals - No labs this week</i>	

SAFETY:

- Safety goggles must be worn at all times while in lab - THE CHEMISTRY DEPARTMENT STOCKROOM DOES NOT LOAN OUT SAFETY GOGGLES.
- Lab coats must be worn at all times while in lab- THE CHEMISTRY DEPARTMENT STOCKROOM DOES NOT LOAN OUT LAB COATS.
- No shorts, open toed shoes (flip flops), and exposed mid-ribs are allowed in lab. If you come unprepared, you will not be allowed to do the lab.
- No food or drink in the lab.
- No chemicals are to be poured down the drains. Please follow the chemical disposal instructions outlined in each lab. If you are unsure of how to dispose of something, ASK.
- No Cell phones. Cell phones are a distraction when dealing with chemicals and could result in injury to yourself or those around you.
- Gloves must be worn at all times during an experiment.
- Gloves must be removed before exiting the lab. For example, you should never use door knobs with gloves on or you will contaminate the door knob. Take your gloves off when you leave the room and put on a new pair when you return.
- Tie back long hair. Any long hair or loose clothing must be tied back prior to lab.
- If you wear contact lenses, you are advised to remove them before lab and wear glasses.
- Keep a clean workspace and be sure to clean up before you leave.
- Report all accidents in the lab (spills, burns, cuts, scrapes etc) even if you think they are minor
- Wash your hands before leaving the lab.

- **No running or horseplay** in the lab.

Title IX: Title IX violations are taken very seriously at RIT. RIT is committed to investigate complaints of sexual discrimination, sexual harassment, and sexual assault and other sexual misconduct to ensure that appropriate action is taken to stop the behavior, prevent its recurrence, and remedy its effects.

Course Copyright Policy: All course materials students receive or to which students have online access are protected by copyright laws. Students may use course materials and make copies for their own use as needed, but unauthorized distribution and/or uploading of materials without the instructor's express permission is strictly prohibited. RIT Policy C03.2 Copyright Policy addresses this issue (<https://www.rit.edu/academicaffairs/policiesmanual/c032>). For example, uploading completed labs, homework, or other assignments to any study site constitutes a violation of this policy. Students who engage in the unauthorized distribution of copyrighted materials may be held in violation of the University's Code of Conduct, and/or liable under Federal and State laws.

Personal Protective Equipment (PPE): RIT Policy includes the use of Personal Protective Equipment (PPE). The RIT Safety Plan reads, in part: "Appropriate face masks must be worn by students at all times when in classrooms, labs, and lecture halls, regardless of whether physical distancing can be maintained. Situations in which respiratory output is greater than normal (e.g., performing arts, athletic activities) but where a face mask impedes the activity, a minimum physical distance of ten (10) feet shall be implemented. Food and drink are not permitted in classrooms, labs, and lecture halls."