Chemistry 241L Course Syllabus – Spring 2013

Laboratory in Separations and Analytical Characterization of Organic and Biological Compounds

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TA OFFICE HOURS

• The TA office hours will be announced during the week of lab check-in.
• Do not wait until the night before or the day of your lab to contact your TA for help.
• If you email your TA please give them time to email you back, at least 24 hours.
• The 241L TA office hours will be held in Morehead Labs Room 408A.

COURSE OBJECTIVES

• To provide students with the opportunity to learn a variety of chromatographic and spectroscopic techniques.
• To provide students with an opportunity to develop practical laboratory skills.
• To teach students how to make reliable and accurate observations and measurements.
• To teach students how to interpret and report experimental results in a scientific manner.
• To continue developing a student’s critical thinking and problem solving skills.

LAB CHECK-IN

• Lab check-in for Chemistry 241L will take place the week of January 14th.
• Meet in Chapman 125 on your scheduled lab day and time.
• Read the check-in information posted on your lab sections Sakai site and make sure to follow the instructions so that you arrive prepared.
• Registered students who do not show up for their scheduled lab check-in will automatically be dropped from the lab.
• Every student must have a spring 2013 Chemistry 241L Lab Manual (Course Pack Publishing, 2nd Floor of Student Stores). The forms required to check-in are contained in the lab manual and are required in order to check in.

NOTE: Using an old lab manual or a lab manual other than the spring 2013 manual will be treated as an Honor Code Violation.
COURSE PRE- AND COREQUISITES

Prerequisites: Chemistry 101L and 102L.

Pre- or Corequisites: Chemistry 241 or 241H.

It is an honor code violation to be enrolled in a course while lacking the proper pre- or co-requisites.

TEXTBOOKS & EQUIPMENT

- Spring 2013 Chemistry 241L Lab Manual – Required. Purchase from UNC Student Stores, Course Pack Publishing. Every student must purchase a lab manual. The forms required to check-in are contained in the lab manual and are required to be allowed to check into lab.

NOTE: If you are not registered for a lab, hold off purchasing a lab manual until you see if you get into a lab. If you are added to a lab section the day of check-in, you can always walk over to Student Stores to pick up a lab manual.


NOTE: If you have previously taken the class and have since sold your textbook, there is a copy in the Chemistry Resource Center located in Kenan Labs Room C143.

- Laboratory notebook. Pages must be pre-numbered and it must have carbonless duplicate pages. You may use an old lab notebook if it meets the criteria listed here. Alpha Chi Sigma (AXE) chemistry fraternity will be selling lab notebooks outside of Morehead Labs 102 right after the lab check-in lectures for $10.00 (cash or check).

- Scientific calculator.

- Laptop computer.

- Lab goggles. If you forget your goggles you will have to go to Morehead Labs 102 and purchase a new pair. If you have never had a chemistry lab at UNC you will receive a free pair the day of lab check-in. You will receive instructions during the lab check-in lecture.

- Lab Coat – Required:
  - Part of the lab notebook royalties goes towards providing each student with a disposable lab coat.
  - You may purchase a nicer, full size lab coat from the bookstore, but this cost would fall on the student. If you decide to use your own lab coat the department must approve the type of lab coat before the start of labs. Lab coats that only come to the waist, for instance, are not acceptable.
  - Lab coats must stay in the lab room, they may not be taken with you when you leave lab.
STUDENT LAPTOP COMPUTERS

- There are a number of experiments you perform in this laboratory course that require you to have your laptop. At the start of each experiment, the lab manual will state whether your laptop will be required or not for that experiment.
- Every student is required to bring their laptop computer when instructed, regardless of whether you will be working with a partner or in groups.
- If you forget to bring your laptop to lab you will not be allowed to perform that day's experiment. We will allow you to make up the lab but we will penalize you 10 points for not coming to lab prepared.
- It is your responsibility to make sure your laptop is working properly. If you are having problems with your laptop you will need to resolve those problems before your scheduled lab, otherwise you will need to borrow a laptop from a friend.

SAKAI

- The 241L syllabus, software, announcements, grades and other important lab information will be available on Sakai (https://sakai.unc.edu).
- Lab reports are submitted through the “Assignment” feature on Sakai so it is important that you have access to the Sakai site for your lab section.
- If you cannot login to Sakai, please email Dr. Tiani (tiani@email.unc.edu).

ATTENDANCE & LAB MAKE-UP POLICY

- Read the section titled “Attendance Policy and Lab Absences” in the Chemistry 241L Lab Manual (pp. 16-17). This section contains the lab policy for how to obtain an excused absence and how to make up missed lab work in the case of an excused absence.

GRADING AND GRADING POLICIES

The points available in this class will be assigned in the following manner:

8 Pre-Lab Assignments (5 points each): 40 points
8 Quizzes (5 points each): 40 points
9 Graded Lab Notebooks (10 points each): 90 points
Lab Reports
  Experiments 0, 2, 3, 4, 5, 6 & 7 (100 points each): 700 points
  Experiment 1: 200 points
Lab Performance (10 points/lab): 80 points
Lab Final: 150 points
Total: 1300 points

- Your TA will grade all your reports and assignments throughout the semester. However, the lab instructor, not your TA, will determine all final lab grades.
• Because lab section averages range widely, section averages will be normalized to ensure consistency and to account for differences in grading across sections.

• You will be assigned a letter grade based on your standing in your given lab section.

• Different sections may have different cutoffs because of differences in each sections average and class distribution.

LAB REPORTS

• The criteria for how to write the formal and informal lab reports are provided in the Introduction to Chemistry 241L chapter of the lab manual (pp. 21-29).

• Lab reports are due one week after the scheduled completion of the experiment. Experiment 1 is a two-week experiment so the lab report will be due one week after the completion of the second week of experimental work.

• In many instances this semester you will work with a partner or as part of a group, carrying out the experiment and acquiring data collectively. However, there is no collaboration on the writing of lab reports, this includes working up the data, answering experiment questions, discussing your data, and constructing plots. All the work within your report must be your own.

• If you are having difficulties writing your report or have questions, seek help from your TA.

• Lab reports are submitted electronically from within Sakai. The instructions for uploading lab reports on Sakai are located on Sakai under the “Documents” tab in the left side navigation bar.

LATE LAB REPORTS

• Late lab reports must be emailed to Dr. Tiani (tiani@email.unc.edu). DO NOT email your report to your TA, do not try to upload your report late and do not attempt to turn in a paper copy of your report.

• It is the responsibility of the student to verify that their lab report was properly uploaded to Sakai and submitted by the scheduled deadline.

• Lab reports turned in late will be penalized 10 % per day. Please note that this penalty is 20 points per day for the GC report because this is a 200-point report.

• Late lab reports must be received by Dr. Tiani no later than 48 hours past the scheduled due date; lab reports received later than 48 hours with no extension will receive a zero.

PRE-LAB ASSIGNMENTS

• A pre-lab assignment will be due at the beginning of each lab period, with the exception of the week of lab check-in.

• Read the section titled “Pre-Lab Assignments” (p. 20) in the Introduction to Chemistry 241L chapter of the lab manual. The specific criteria for how to complete the pre-lab assignments are provided on the pages within this section.
QUIZZES

- A 10 min quiz will be given at the beginning of each lab period, with the exception of the week of lab check-in.
- The purpose of the lab quizzes is to ensure that you have adequately read and prepared for the scheduled experiment.
- Prepare for quizzes by carefully reading the scheduled experiment, paying attention to the goals of the lab, safety, pertinent calculations, sample preparation, data analysis, and experimental information.

LAB NOTEBOOKS

- Students must turn in the duplicate pages from their lab notebooks at the end of each lab period. If you leave lab without submitting your lab notebook pages, you will receive a zero for that experiments lab notebook grade.
- Read pp. 17-19 in the Introduction to Chemistry 241L chapter of the 241L Lab Manual. The specific requirements for how to maintain a lab notebook, as well as what should go into the lab notebook, are provided on these pages.

LAB PERFORMANCE

- At the end of each lab period, except the day of check-in, your TA will assign 10 lab performance points. When your TA assigns performance points they are looking to see whether you worked safely in lab (e.g., do you wear your goggles or does your TA have to constantly remind you to put them on), did you follow the instructions provided in the lab manual, did you follow your TAs instructions, and did you perform the techniques shown to you properly.
- You will lose lab performance points if you arrive late to lab; you arrive unprepared for lab, such as not bringing your laptop or safety glasses, for not wearing the correct clothing and footwear, and for being disruptive to the class.

LAB FINAL

- The lab final is cumulative and is scheduled for the week of April 8th in Chapman 125 on the day and time of your scheduled lab period.
- The lab final will include definitions, glassware identification, equipment identification, instrumentation, data analysis, data interpretation, calculations, lab notebook questions, instrumental questions, questions regarding analytical methods used, experimental questions, theory, and lab safety.
- Prepare for the lab final by going back through your lab reports, the experiments in the lab manual, the Introduction to Chemistry 241L chapter of the lab manual (safety items) and those sections of the lab techniques textbook (“Making the Connections”) that were assigned throughout the semester.
- An equation sheet will not be provided.
- You will need a programmable calculator.
- You will not need your laptop.
• You do not need a Scantron sheet.

HONOR CODE

The Department of Chemistry faculty adopted the following policy on September 9, 1977.

“Since all graded work (including homework to be collected, quizzes, papers, mid-term examinations, final examination, research proposals laboratory results and reports) may be used in the determination of academic progress, no collaboration on this work is permitted unless the instructor explicitly indicates that some specific degree of collaboration is allowed. This statement is not intended to discourage students from studying together or working together on assignments which are not to be collected.”

Additional information regarding the Honor Code at UNC-CH can be found at the following website: [http://www.unc.edu/depts/honor/](http://www.unc.edu/depts/honor/)

The following situations below will be treated as honor code violations based on the requirements specified within the syllabus and the Introductory Chapter of the Chemistry 241L lab manual, where the lab polices are discussed in more detail.

• Plagiarism. The ideas presented in your report must be your own. If you present someone else’s ideas or work (from books, old lab reports, the Web, the lab manual) as your own, this is plagiarism. You can present facts from an outside source, as long as you properly reference the source.

• Allowing students to use your work as their own. Do not allow your partner or other students to have access to your lab reports. You may share data if you collected the data together, but everything else (calculations, graphs, tables) must be done alone.

• Using old lab reports, even if you just want to glance over them, is an honor code violation.

• Do not rearrange a paragraph or some other piece of work that is not yours in the hope of disguising the work as your own.

• Unauthorized collaboration. If you need help you must talk with your TA. All lab reports must be written independently.

• Using an old lab manual from a previous semester.