

C121 Elementary Chemistry Laboratory
Fall 2009
Syllabus

Instructor: Dr. Jill Robinson
Office: Chemistry Building Room A314
Office Hours: 9:00-10:00 AM Thursday or by appointment
Phone: 855-6601
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Class Time: Thursdays from 8:00-8:50 AM in Chemistry 122

Required Materials:

1. **Required:** Chemistry C103/121, Chemistry Laboratory Manual 6th edition, by J. Robinson, K. Arnold, and R. Arnold. Publisher: Hayden-McNeil, 2008.
2. **Required:** Safety Goggles
3. **Required:** Scientific calculator

Course Overview

In the laboratory you will have the opportunity to experience directly some of the relationships discussed in C101 lecture. You will also practice basic laboratory techniques through hands-on exploration of basic chemical principles. The laboratory is extremely important in gaining an understanding and appreciation of chemistry. It will help you master concepts in C101.

Course Website

The class website is <http://www.chem.indiana.edu/academics/ugrad/Courses/c121/default.asp>. You will find useful information about the class on this website such as lecture notes and answer keys.

CALM:

Calm pre-lab questions are accessible at <http://calm.indiana.edu/calm>. Click on the link for C121 Lab. Credit will be given for correctly answered questions. In order to get credit for the CALM pre-lab, you must answer the questions **before 10 AM on Monday during the week of the lab**. Grades for prelab assignments and lab reports will also be posted on C121 CALM.

Academic Integrity

You are expected to observe high standards of intellectual integrity and honesty. Plagiarism and cheating will be taken seriously in this class by the professor and by the AIs. Academic dishonesty includes cheating on exams or quizzes, presenting, as your own, work that is **not** in fact your own, whether you take it from another student, from a library book, from the Web or wherever. It also includes allowing your **own** work to be misrepresented in this way as some other student's work.

Cleverly rewording someone else's work, in order to disguise what you are doing, does not make any difference; it's still academic dishonesty if the thoughts behind it are not your own. Please be aware that laboratory reports are to be an individual effort and that students collaborating on the write up of the experiments are considered guilty of cheating. When in doubt, *always* cite your sources!

You are advised to read the *Code of Student Rights, Responsibilities and Conduct* especially Part III: "Student Misconduct" and Part IV: "Student Disciplinary Procedures." It is also available online at <http://dsa.indiana.edu/Code/index1.html>. The standard penalty for cheating and/or plagiarism is a grade of F in the entire course. All cases of academic misconduct will be immediately reported to the Dean of Students as well as the Dean or Director of the student's school.

Laboratory Reports:

Laboratory reports will be due at the beginning of the next laboratory after the experiment is performed. If you are absent for a laboratory, you must e-mail your AI **prior** to your absence and make arrangements to turn in your due lab report. A 20% point deduction will be taken for each day a lab report is turned in late. Most lab reports consist of two parts, the tear-out report from your lab manual and a typed summary. Details on writing the lab summary will be provided on a separate handout. Summaries will be submitted online through www.turnitin.com.

Absence Policy:

There are no makeup labs. You are allowed to drop one experiment score to allow for an absence for any reason.

Grades

Laboratory Skills Worksheet	20 pts.
Experiments	320 pts.
9 @40 pts. each, drop lowest	
CALM Prelab	
11 @ 6 pts. each, drop lowest	60 pts.
In-class assignments	
12@5 pts. each, drop 2 lowest	50 pts.
Lab exam	50 pts.
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Total	500 pts.

Lab Schedule:

<u>Week of</u>	<u>Experiment</u>
9/2	Labs do not meet
9/8	Safety and Lab Skills
9/14	How much sugar in the drinks? (handout)
9/21	Density of Pennies
9/28	Forensic Chemistry (handout)
10/5	Spectroscopy of Food Dyes
10/12	Synthesis of Biodiesel (handout)
10/19	Shape of the Molecule (Spartan Lab)
10/26	Alka Seltzer Lab (limiting reactant)
11/2	Synthesis of Aspirin Week 1
11/9	Synthesis of Aspirin Week 2
11/16	What's in the water week 1
11/23	Thanksgiving break
11/30	What's in the water week 2
12/7	Meet in lab to turn in the final report.

Note: A lab final will be given Thursday December 10th at 8AM in C122.

Laboratory Reports for C121

GENERAL INFORMATION

- Lab reports are due at the beginning of the next laboratory after the experiment is performed.
- If you know you will miss lab, e-mail your AI to set up a time to turn in the lab report that is due prior to missing the lab.
- A 20% penalty will be taken for each day a lab report is turned in late.
- Lab reports consist of a Results and Analysis section and a Summary.

RESULTS AND ANALYSIS

- Instead of a laboratory notebook, you will use the Results and Analysis section in your lab manual to record procedures, data and analysis.
- All entries must be made in **permanent ink**.
- At no time should original data be altered, erased, or covered using white out. Errors in calculations or observations may be noted by drawing a single line through the mistakes. (This way you can later remember and learn from mistakes).
- Enter all data and answers in a clear and organized manner.
- Clearly label all entries, **including units!**
- Attach all plots, spectra, or additional pages to the Results and Analysis section before submitting your report.

SUMMARY

- Summary questions are listed at the end of the Results and Analysis section. Be sure to completely answer all questions.
- **Make sure all your claims are supported with data.**
- The summary must be typed, 1-2 pages in paragraph form
- Use 12 pt font and 1" margins and either single-spaced or 1.5-spacing.
- The accepted standard for scientific papers is use of third person (**do not use "I" or "we"**) and past tense (since the experiment was already completed!).
I weighed out 25.0 grams of NaOH. (incorrect)
25.0 grams of NaOH was weighted out. (correct)
- Writing quality: points will be deducted if your writing lacks clarity, grammatical correctness, punctuation, or contains misspelled words.
- References: Several times you will be asked to compare your results to literature sources. Be sure to **cite all sources** you use whether it is your book, lab manual, internet, or journal articles.
- Summaries must be submitted to Turnitin.com **before** your lab section in order to be considered on time. **No hard copies or e-mailed copies will be graded.**

NOTES ON PLAGIARISM

Again, remember that your lab report **must be your own work**, even though you worked with a partner during the laboratory period. Each student must complete all calculations and submit reports

on his or her own, and any evidence of copying or cheating will invoke the strict penalties found in the syllabus.