1-2013

CHMY 124N.00: Introduction to Organic and Biochemistry Laboratory

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Introduction to Organic & Biological Chemistry Laboratory
Chmy 124N Spring 2013

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Office Hours: Monday 9:10-10am, Tuesday 10:10-11am and by arrangement

Chmy 124N satisfies the laboratory component of general education Group XI, Natural Sciences. Students synthesize organic compounds or isolate them from biological materials, purify and analyze the compounds using methods and instrumentation typically used in research laboratories. Students also develop quantitative relationships between variables, apply patterns determined with known samples to unknown materials, and practice logical/critical reasoning to problems.

Chmy 123 is a pre-/co-requisite for this course. Chmy 121 or equivalent general chemistry course is a pre-requisite for Chmy 123 and 124.

Pre-Lab Meeting:

M 12:10-1:00 pm ULH 101
This meeting prepares you to do the experiments efficiently, to understand the experiments, and to be aware of important safety issues. *Attendance is mandatory.*

Laboratory Sections:

Individual lab sections meet on Tuesday and Thursday in the mornings (9-12) and afternoons (1-4).
You must attend the section for which you are registered.

Supplies Required for Lab (all available in bookstore):

· Organic and Biological Chemistry Laboratory CoursePac
· Safety Goggles-Department policy requires all persons in the laboratory to wear approved safety goggles.
· Sharpie® felt-tip pen is useful for writing on glass.

*Spectroscopy data and exam study guides will be posted on the Chmy 124 electronic reserve site at http://eres.lib.umt.edu/eres. Password is CHMY124.

Student Conduct

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available at http://www.umt.edu/SA/VPSA/indec.cfm/page/1321 .

The majority of Chmy 124 students are honest and responsible. Be advised that I do enforce the Student Conduct Code in order to protect the honest students from academic misconduct.

Texting, private conversations and early departures from the lecture room are disruptive. Please respect your colleagues.

Grades will be based on the following components:

200	· points shown are total for lab reports + protocols exp 1 (15), exp 2 (20), exp 3 (20), exp 4 (20), exp 5 (40), exp 6 (25), exp 7 (20), exp 8 (20), exp 9 (10), exp 10 (10)
40	· pop quizzes (given at unannounced intervals during M pre-lab meetings)
80	· two exams
320	· total pts

Letter grades will be based on the total out of 320 possible pts. Letter grades for the course will be assigned as follows:

	≥93.33% guarantees A	≥90.00% guarantees A-
≥86.67% guarantees B+	≥83.33% guarantees B	≥80.00% guarantees B-
≥76.67% guarantees C+	≥73.33% guarantees C	≥70.00% guarantees C-
≥66.67% guarantees D+	≥63.33% guarantees D	≥60.00% guarantees D-
<60.00% guarantees F		

Lab protocols are outlines of the procedures that you will do in the laboratory. Writing protocols each week ensures that you have a reasonable understanding of the lab exercise, so that you can work safely and efficiently.

If you do not have a complete protocol ready to be initialed by the TA within the first 15 minutes, you cannot start the lab and you will receive a zero for the exercise.

Lab protocols:
- -can be hand-written or word-processed
- **-must provide the information needed to complete that experiment** (general lab techniques not needed), including information on tables
- -must be in your own words (no scanning or photocopies)
- -must include safety notes

Lab reports are based on the tear-out report sheets at the end of each exercise.

Lab reports stapled to appropriate protocols are due as indicated on the first page of the report: either before the end of the lab period or during the first 15 minutes of the next lab period. Late penalty of 4 pts per day will be assessed after the due time.

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Week of:	Experiment
Jan 28	Introduction, Procedural and Safety Issues
Feb 04	Lab Locker Check-In Experiment 1: Automatic Pipet Practice
Feb 11	Experiment 2: Density and Composition of Solutions
Feb 18	President's Day, no pre-lab lecture, but we will have lab this week Experiment 3: Synthesis, Purification and Analysis of Aspirin
Feb 25	Experiment 3: Synthesis, Purification and Analysis of Aspirin (cont.)
Mar 04	Experiment 4: Introduction to Chromatography
Mar 11	Experiment 5:UV-Visible Spectroscopy, Absorption Spectra of Plant Pigments
Mar 18	Experiment 5: UV-Visible Spectroscopy, Absorption Spectra of Plant Pigments (cont.)
Mar 25	Experiment 6: UV-Visible Spectroscopy, Quantitation of Protein
Apr 1	Spring Break
Apr 8	Experiment 7: Fischer Esterification
Apr 15	Exam 1 covers Experiments 1-6 Experiment 7(cont.)
Apr 22	Experiment 8: Life Sciences Data Bases/MSDS Experiment 9: Gas Chromatography Experiment 10: High Performance Liquid Chromatography
Apr 29	Experiments 8, 9, 10 (cont.)
May 6	Exam 2 covers Experiments 7-10 Check-out
May 15	10:10-noon scheduled final exam No final exam in Chmy 124. Scheduled final exam time used to complete any unfinished business.