Fall 9-1-2015

CHMY 124.00: Introduction to Organic and Biochemisty Lab

Holly Thompson
University of Montana, Missoula, holly.thompson@umontana.edu

Introduction to Organic & Biological Chemistry Laboratory

Chmy 124 Fall 2015

Instructor Information

Instructor: Dr. Holly Thompson
Office : Chem Building 402
Phone/email: 243-2070 holly.thompson@umontana.edu (best contact)
Office Hours: Monday 9:10-10am, Tuesday 10:10-11am and by arrangement

Course Description

Chmy 124 provides an introduction to general, organic and biochemistry laboratory skills and concepts. Students synthesize organic compounds or isolate them from biological materials, purify and analyze the compounds using "wet chemistry" and instrumental methods. Students practice careful measurements and observations, develop quantitative relationships between variables, apply patterns determined with known samples to unknown materials, and practice critical thinking skills.

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.

Weekly Schedule

Pre-Lab Meeting: M 8:10-9:00 am Chem 123
This meeting prepares you to understand the experiments and to work safely and efficiently. *Attendance is mandatory.*
You should take good notes during pre-lab lecture to be prepared for lab and for the exams.

Laboratory Sections:
Individual lab sections meet on Tuesday and Friday.
You must attend the section for which you are registered.

Course Materials and Electronic Devices

· Chmy 124 CoursePac (available in bookstore, required)
· Safety Goggles, green with elastic strap (available in bookstore, required)
· Sharpie® felt-tip pen (available in bookstore, not required)

· calculator (required; cell phone use is not permitted in lab)

· Several weeks during the semester, you will be asked to bring laptop/tablet to lab. Students without these devices can use the limited number of computers available in the Learning Center in Chem 107.

*Spectroscopy data, practice problems and exam study guides will be posted on the Chmy 124 Moodle site.

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 University of Montana Student Conduct Code is available at http://www.umt.edu/vpsa/policies/student_conduct.php.
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.

Disability Modifications

DSS students, please contact me the first week of the semester to arrange accommodations, even if you do not yet have your DSS letter. If you think you may have a disability adversely affecting your academic performance, please contact DSS, Disability Services for Students (Lommasson 154, 243-2243).

Grades

205*	· 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 (15)	
40	· pop quizzes (given at unannounced intervals during M pre-lab meetings)	
80	· two exams	
325*	· total pts	

*Subject to change based on availability of experiment 9.

Letter grades will be based on the total out of 325* 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		

Explanation of Lab Protocols and Reports

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 5 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 all of the information needed to complete that experiment other than general lab techniques (such as using balances or volumetric devices)
· must provide information from tables if needed to complete the experiment
· 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 by the end of the lab period or during the first 5 minutes of the next lab period.

Late penalty of 20% per day will be assessed after the due time. Late penalty also assessed for late protocol, graphs, etc.

Chmy 124N Schedule Fall 2015

Week of:	Experiment
Aug 31	Introduction, Procedural and Safety Issues **come to lab this week**
Sept 07	Monday is Labor Day, no pre-lab lecture **come to lab this week** Lab Locker Check-In Experiment 1: Automatic Pipet Practice
Sept 14	Experiment 2: Density and Composition of Solutions
Sept 21	Experiment 3: Synthesis, Purification and Analysis of Aspirin
Sept 28	Experiment 3: Synthesis, Purification and Analysis of Aspirin (cont.)
Oct 05	Experiment 4: Introduction to Chromatography
Oct 12	Experiment 5:UV-Visible Spectroscopy, Absorption Spectra of Plant Pigments
Oct 19	Experiment 5: UV-Visible Spectroscopy, Absorption Spectra of Plant Pigments (cont.)
Oct 26	Experiment 6: UV-Visible Spectroscopy, Quantitation of Protein
Nov 02	Experiment 7: Fischer Esterification
Nov 09	Exam 1 Experiment 7: Fischer Esterification
Nov 16	Experiment 8: Life Sciences Databases/MSDSs Experiment 9: GC Experiment 10: HPLC
Nov 23	Chmy 124 (to keep Tuesday and Friday sections in synchrony) Wednesday-Friday Thanksgiving Holiday, no classes
Nov 30	Experiments 8, 9 and 10 (cont.)
Dec 07	Exam 2 Lab Locker Check-out
Dec 14	Scheduled Final Exam 8-10 am, wrap up any unfinished business.