

1-2013

# CHMY 123N.00: Introduction to Organic and Biochemistry

Holly Thompson

University of Montana - Missoula, [holly.thompson@umontana.edu](mailto:holly.thompson@umontana.edu)

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Chmy 123N Spring 2013  
Introduction to Organic & Biochemistry  
Dr. Holly Thompson

office hrs: Monday 9-10am, Tuesday 10-11am and by arrangement  
Please email me to arrange an appointment if you have conflicts w/ office hrs.  
office: Chem 402 (come up the central staircase)  
phone: 243-2070  
e-mail: [holly.thompson@umontana.edu](mailto:holly.thompson@umontana.edu) best way to contact me

*Chmy 123N satisfies Group XI, Natural Sciences, for the general education requirement. This course explores the **molecular logic of living organisms**. Fundamental chemical and physical properties of simple organic compounds are responsible for the organization and function of living organisms: cell structure, flow of energy and information, etc. Chmy 123 students study some of the fundamental properties of organic compounds and examine how these properties affect the activity of biological molecules. Students learn how to apply patterns of structure/function relationships in known carbohydrates, lipids and proteins to new examples, using critical thinking and logic.*

The prerequisite for Chmy 123 is a grade of "C-" or better in Chmy 121 or permission of the instructor. Alternatives include "C-" or better in Chmy 141 or other college-level general chemistry course.

Chmy 124 is the Introduction to Organic & Biochemistry Lab course that accompanies Chmy 123. Most, but not all, majors require Chmy 124.

**Text:** Introduction to Organic and Biological Chemistry, Volume Two, 10<sup>th</sup> ed, Bettleheim, Brown, Campbell Farrell & Torres  
**required** *Assigned readings and problems are posted on the eres site.*

**Solutions Manual:** Answers to odd-numbered back-of-the-chapter problems are in the back of the textbook, solutions manual has answers to the even-numbered problems.  
**required**

**Model Kit:** Chmy 123 model kit (or larger)  
**required**

The UM bookstore has the text, solutions manual and model kit bundled together. If you plan to use the 9<sup>th</sup> edition, you must have the solutions manual and model kit.

**Lecture Notes:** The lecture notes for each week will be put on electronic reserve by Monday of the following week. You can find the electronic reserve materials at <http://eres.lib.umt.edu/eres>. The password for our course site is CHMY123.

**Study Guides:** Study Guides will be posted on eres by Monday before each exam. Each exam covers only material through the previous week's lectures. Exams are cumulative throughout the semester.

## Weekly Schedule

Lectures:	TWRF (3 days)	12: 10-1:00pm	ULH 101
Recitations:	M	see information for individual sections	
Help Sessions:	F usually	12: 10-1:00pm	ULH 101
Exams:	W usually	12: 10-1:00pm	ULH 101

*Private conversations during the lecture, use of electronic devices and early departures from the classroom are disruptive. **Please respect your colleagues.** If either issue becomes a problem during the semester, I will stop the lecture until the disruption stops, or institute or other appropriate responses.*

*It is not possible to take good chmy 123 notes with a computer. If you choose to use one, please sit in the back row so that you don't disrupt other students.*

## Learning Assessment:

**A. Recitation exercises** are open-book worksheets. **Please bring your textbook, class notes and model kit** to recitation. You are encouraged to work with a partner; talking about chemistry is a great way to learn. Please go to the recitation section in which you are officially enrolled. See me if you have a conflict and we will try to accommodate your schedule. The exercises are designed to take ~40 minutes, if you keep up with the lectures, reading and assigned problems. You must turn in exercises at the end of the period to get credit. Some of the exercises require you to build models and show them to the TA for credit.

There are thirteen 10 pt recitations. The lowest three will be dropped for a total of 100 possible pts from the recitations.

There are no make-up recitations. However, be sure to get a copy of any missed recitation exercise.

## B. On-line Homework

Working practice problems is the key to understanding chemistry. You will need to get a Sapling account, using the following directions.

1. Go to <http://saplinglearning.com>
- 2a. If you already have a Sapling Learning account, log in then skip to step 3.
- 2b. If you have Facebook account, you can use it to quickly create a SaplingLearning account. Click ""register"" located under the username box, then click ""Login with Facebook"". The form will auto-fill with information from your Facebook account (you may need to log into Facebook in the popup window first). Choose a password and timezone, accept the site policy agreement, and click ""Create my new account"". You can then skip to step 3.
- 2c. Otherwise, click ""create account"" located under the username box. Supply the requested information and click ""Create my new account"". Check your email (and spam filter) for a message from Sapling Learning and click on the link provided in that email.
3. Find your course in the list (listed by school, course, and instructor) and click the link.
4. Select your payment options and follow the remaining instructions.

Once you have registered and enrolled, you can log in at any time to complete or review your homework assignments.

During sign up - and throughout the term - if you have any technical problems or grading issues, send an email to [support@saplinglearning.com](mailto:support@saplinglearning.com) explaining the issue. **The Sapling support team is almost always more able (and faster) to resolve issues than your instructor.**

Students earn up to maximum of 80 pts for the on-line practice problems, from a total of 92 possible pts.

C. Exams are multiple choice, generally 25 questions worth 4 pts each. Most students find that 50 minutes provides plenty of time to complete the exam. Help sheets, periodic tables and calculators are not permitted.

You will need 1 large pink enrollment scantron form for the 1<sup>st</sup> exam and 6 small red forms.

Grading is based on the scantron forms, not the written copy of the exam. The written copy of your exam plus a report sheet with your score and the exam key will be returned to you.

Exams There are six regular 100 pt exams. The lowest of these exams will be dropped, for a total of 500 possible pts.

If you miss an exam due to legitimate excuse (illness, military duty, field trip, etc), you must contact me BEFORE the exam to arrange a make-up exam. Make-up exams will be a mixture of short-answer and multiple choice problems.

DSS students-please email me the first week to qualify for accommodations.

Final Exam The final exam is worth 120 pts and cannot be dropped.  
The final exam is scheduled for Wednesday, May 15, 8:10-10 am.

Schedule your plane reservations, internships, employment for after this time.  
**No early finals!**

You will be provided with a worksheet that will guide your studying for the comprehensive final exam.

### Getting to Letter Grades

The points from exams I-VI (500), recitations (100), Sapling homework (80) and final exam (120) will be added together, for a total of 800 possible pts. Letter grades will be assigned as follows:

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

Getting Help with Chmy 123 (see also the e-res site for current details)

Dr. T's office hours or make an appointment that fits your schedule.

Dr. T's help sessions on Tuesday mornings 8-9 am, Chem 401.

TA (teaching assistant) office hours to be announced

Study Jam

organized by Angie Quintero

Monday and Wednesday evenings, 6:30-9pm, UC dining room (2<sup>nd</sup> floor)

**Study Jam starts Wednesday February 6**

other specialized programs (TRIO, vets-vets study group, DSS, etc)

private tutors-ask Dr. T. for suggestions

## 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>.*

**Students are not permitted to make notes on the scantron cards. Marks other than name, id, test number and version, and bubbles for answers will be investigated for academic misconduct.**

The majority of Chmy 123 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.

*The schedule follows. Please note that University of Montana academic policy sets a deadline of the 45<sup>th</sup> instructional day to drop courses or change grading status (for example, from traditional letter grade to cr/no credit). After that day, documentation of special circumstances is required to make these changes. Be advised that I do follow university policy.*

Dates	Topics Covered (approximate) and Exam Dates (definite)
M 1/28	recitation 1
T 1/29	course mechanics, how to succeed in biochemistry
W 1/30	lec 1: alkanes & isomers
R 1/31	lec 1: alkanes & isomers
F 2/01	lec 1: alkanes & isomers
M 2/04	recitation 2
T 2/05	lec 2: functional groups
W 2/06	lec 2: functional groups
R 2/07	lec 2: functional groups
F 2/08	review session
M 2/11	recitation 3
T 2/12	lec 3: polarity, intermolecular attraction & solubility
W 2/13	Exam I
R 2/14	lec 3: polarity, intermolecular attraction & solubility
F 2/15	lec 3: polarity, intermolecular attraction & solubility
M 2/18	President's Day Holiday
T 2/19	lec 3: polarity, intermolecular attraction & solubility
W 2/20	lec 4: acid-base chemistry
R 2/21	lec 4: acid-base chemistry
F 2/22	review session
M 2/25	recitation 4
T 2/26	lec 4: acid-base chemistry
W 2/27	Exam II
R 2/28	lec 5: redox chemistry
F 3/01	lec 5: redox chemistry
M 3/04	recitation 5
T 3/05	lec 5: redox chemistry
W 3/06	lec 6: chirality
R 3/07	lec 6: chirality
F 3/08	review session
M 3/11	recitation 6
T 3/12	lec 6: chirality
W 3/13	Exam III
R 3/14	lec 7: linkages
F 3/15	lec 7: linkages
M 3/18	recitation 7
T 3/19	lec 7: linkages
W 3/20	lec 8: carbohydrate chemistry
R 3/21	lec 8: carbohydrate chemistry
F 3/22	review session

M 3/25 recitation 8  
T 3/26 lec 9: carbohydrate biology  
W 3/27 Exam IV  
R 3/28 lec 9: carbohydrate biology  
F 3/29 lec 9: carbohydrate biology

Sat-Sun 3/30-4/7 Spring Break

M 4/08 recitation 9 45<sup>th</sup> instructional day,  
last day to drop/add, change grading options

T 4/09 lec 10: lipids  
W 4/10 lec 10: lipids  
R 4/11 lec 10: lipids  
F 4/12 review session

M 4/15 recitation 10  
T 4/16 lec 10: lipids  
W 4/17 lec 10: lipids  
R 4/18 review session  
F 4/19 exam V

M 4/22 recitation 11  
T 4/23 lec 11: proteins  
W 4/24 lec 11: proteins  
R 4/25 lec 11: proteins  
F 4/26 review session

M 4/29 recitation 12  
T 4/30 lec 12: proteins  
W 5/01 lec 12: proteins  
R 5/02 lec 12: enzymes  
F 5/03 lec 12: enzymes

M 5/06 recitation 13  
T 5/07 review session  
W 5/08 exam VI  
R 5/09 worksheets for final exam  
F 5/10 final exam discussion, wrap-up

W 5/15 8-10am final exam  
No early exams will be given.