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CHMY 123.00: Introduction to Organic & Biochemistry

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Introduction to Organic & Biochemistry

Chmy 123N Spring 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 123 explores the molecular logic of living organisms. Fundamental chemical and physical properties of simple organic compounds are responsible for the beautifully complex organization and function of living organisms: cell structure, flow of energy and information, response to environment, etc. Chmy 123 students study fundamental properties of organic compounds and examine how these properties affect the activity of biological molecules. Students learn the critical thinking skills to apply patterns of structure/function relationships in known carbohydrates, lipids and proteins to new examples.

The prerequisite for Chmy 123 is a grade of "C-" or better in Chmy 121 or permission of the instructor.

Chmy 124 is the Introduction to Organic & Biochemistry Lab course that accompanies Chmy 123. Most majors that require Chmy 123 also require Chmy 124. Chmy 124 can be taken during a later semester if necessary; hang on to your 123 textbook and notes if you are waiting to take the lab course.

Weekly Schedule

Recitations:	*M*	*see information for individual sections*
Lectures:	*TWRF (3 days)*	*12:10-1:00pm ULH 101*
Help Sessions:	*F (except exam VI)*	*12:10-1:00pm ULH 101*
Exams:	*W*	*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 other appropriate measures.

It is very difficult 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.

Course Materials

Text: *required*	*Introduction to Organic and Biological Chemistry, Volume Two, 10th ed, Bettleheim, Brown, Campbell Farrell & Torres* *Assigned readings and problems are posted on Moodle.*
Solutions Manual: *required*	*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.*

Model Kit: *Chmy 123 model kit*
required

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

Lecture Notes: *The lecture notes for each week will be posted on Moodle by Monday of the following week.*

Practice Problems: *Additional practice problems for some course content are posted on Moodle.*

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

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.

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).

Learning Assessment (Grades)

Please use your official UM name on everything that you turn in. You can add the name you like to be called, but do not use it instead of your official name. Items turned in with just a first or last name will not earn credit. Sapling homework performed under a nickname will not earn credit.

A. Recitation Exercises

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 and click "US Higher Ed" at the top right.
2. If you already have a Sapling Learning account, log in then skip to step 5.
3. If you have Facebook account, you can use it to quickly create a SaplingLearning account. Click the blue button with the Facebook symbol on it (just to the left of the username field). 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 5.
4. Otherwise, click the link "Create an Account". Supply the requested information and click "Create My Account". Check your email (and spam filter) for a message from Sapling Learning and click on the link provided in that email.
5. Find your course in the list:
    - Expand the subject, "General, Organic, and Biochemistry."
    - Expand the term (i.e Semester 1, Quarter 1). "Semester 2"
    - Click on the link that reads your course title. "University of Montana - CHMY 123 - Spring15 - THOMPSON"
6. Your course requires payment, select a payment option 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 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

Exams are multiple choice, generally 25 questions worth 4 pts each. Most students find that 50 minutes is 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 1st 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.

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

D. Getting to Letter Grades

The points from the best five of exams 1-6 (500), best ten 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:

	≥93.33% guaranteesA	*≥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		

Finding Help with Chmy 123

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 room 401.
TA (teaching assistant) office hours; to be posted on Moodle
Study Jam
Monday and Wednesday evenings, 6:30-9pm, UC dining room (2nd floor)
Study Jam starts Wednesday February 4
other specialized programs (TRIO, vets-vets study group, DSS, etc)
private tutors-ask Dr. T. for suggestions

Daily Schedule

The schedule follows. Please note that University of Montana academic policy sets a deadline of the 45th instructional day to drop courses. After that day, documentation of circumstances beyond the student's control is required to make these changes. Be advised that I do follow university policy.

Dates	*Topics Covered (approximate) and Exam Dates (definite)*
M 1/26	*recitation 1*
T 1/27	*course mechanics, how to succeed in biochemistry*
W 1/28	*lec 1: alkanes & isomers*
R 1/29	*lec 1: alkanes & isomers*
F 1/30	*lec 1: alkanes & isomers*
M 2/02	*recitation 2*
T 2/03	*lec 2: functional groups*
W 2/04	*lec 2: functional groups*
R 2/05	*lec 2: functional groups*
F 2/06	*review session*
M 2/09	*recitation 3*
T 2/10	*lec 3: polarity, intermolecular attraction & solubility*
W 2/11	*Exam I*
R 2/12	*lec 3: polarity, intermolecular attraction & solubility*
F 2/13	*lec 3: polarity, intermolecular attraction & solubility*
M 2/16	*President's Day Holiday*
T 2/17	*lec 3: polarity, intermolecular attraction & solubility*
W 2/18	*lec 4: acid-base chemistry*
R 2/19	*lec 4: acid-base chemistry*
F 2/20	*review session*
M 2/23	*recitation 4*
T 2/24	*lec 4: acid-base chemistry*
W 2/25	*Exam II*
R 2/26	*lec 5: redox chemistry*
F 2/27	*lec 5: redox chemistry*
M 3/02	*recitation 5*
T 3/03	*lec 5: redox chemistry*
W 3/04	*lec 6: chirality*
R 3/05	*lec 6: chirality*
F 3/06	*review session*
M 3/09	*recitation 6*
T 3/10	*lec 6: chirality*
W 3/11	*Exam III*
R 3/12	*lec 7: linkages*
F 3/13	*lec 7: linkages*
M 3/16	*recitation 7*
T 3/17	*lec 7: linkages*
W 3/18	*lec 8: carbohydrate chemistry*
R 3/19	*lec 8: carbohydrate chemistry*
F 3/20	*review session*

M 3/23	*recitation 8*	
T 3/24	*lec 9: carbohydrate biology*	
W 3/25	*Exam IV*	
R 3/26	*lec 9: carbohydrate biology*	
F 3/27	*lec 9: carbohydrate biology*	
Sat-Sun 3/28-4/5	*Spring Break*	
M 4/06	*recitation 9*	*45th instructional day, last day to drop/add*
T 4/07	*lec 10: lipids*	
W 4/08	*lec 10: lipids*	
R 4/09	*lec 10: lipids*	
F 4/10	*review session*	
M 4/13	*recitation 10*	
T 4/14	*lec 10: lipids*	
W 4/15	*lec 10: lipids*	
R 4/16	*lec 11: proteins*	
F 4/17	*review session*	
M 4/20	*recitation 11*	
T 4/21	*lec 11: proteins*	
W 4/22	*Exam V*	
R 4/23	*lec 11: proteins*	
F 4/24	*review session*	
M 4/27	*recitation 12*	
T 4/28	*lec 12: proteins*	
W 4/29	*lec 12: proteins*	
R 4/30	*lec 12: enzymes*	
F 5/01	*lec 12: enzymes*	
M 5/04	*recitation 13*	
T 5/05	*review session*	
W 5/06	*Exam VI*	
R 5/07	*worksheets for final exam*	
F 5/08	*final exam discussion, wrap-up*	
F 5/15 8-10am	*final exam*	
	No early exams will be given.	