

Chmy 123 Introduction to Organic & Biochemistry Fall 2016

Dr. Brooke Martin

Instructor Information

office hrs: Monday 9-10am

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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 how to apply patterns of structure/function relationships in known carbohydrates, lipids and proteins to new examples.

The pre-requisite 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.

Course Materials

Text: Introduction to Organic and Biochemistry custom edition for Chmy 123
required Morris Hein, Scott Pattison and Susan Arena
Assigned readings and problems are posted on Moodle.

Solutions Manual: Answers to back-of-the-chapter problems are found at
required the end of the textbook.

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

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

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.

*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 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.

Weekly Schedule

Recitations: M see information for individual sections
Lectures: TWRf (3 days) 8:10-9:00am Chem 123
Review Sessions: F alternate weeks 8:10-9:00am Chem 123
Exams: W alternate weeks 8:10-9:00am Chem 123
(see schedule details, varies for exam 5)

Learning Assessment

Please use your UM name-of-record on everything that you turn in. You can add the name that you prefer to be called, but do not use that name instead of your name-of-record. Items turned in with just a first or last name will earn 0 pts. Sapling homework performed under a nickname will not be credited to your grade.

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 exercise because they are intended to be (and are) very helpful.

On-line Homework

Working practice problems is the key to understanding chemistry. You will need to get a Sapling account, using the directions at: <http://bit.ly/saplinginstructions>

Once you have registered and enrolled, you can log in at any time to complete or review your homework assignments. 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 80 pts for the on-line practice problems, from a total of 92 possible pts. There are no make-ups for on-line homework.

Exams

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. At no stage will you be permitted to have wi-fi enabled devices (i.e. cell phones) on you during the exam. This includes in your coat pocket. If I see you have one I will take it from you and keep it at the front of the class where you may retrieve it after the exam.

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 for any reason you will take a zero for that exam and that will be your dropped exam.

Final Exam The final exam is worth 120 pts and cannot be dropped.

The final exam is scheduled for Monday, Dec 11, 10:10-12:10 am.

Schedule your plane reservations, internships, employment for after this time as there will be **No early finals!**

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

Note that the grade-book function of Moodle will not be used. We combine points from various types of assessments and the Moodle software does not handle this smoothly. All exams and recitations are returned to students and student Sapling accounts show the points earned for each homework set, so students can readily determine how they are doing in the class.

Getting to Letter Grades

The points from exams I-VI (500), final exam (120), recitations (100) and on-line homework (80) and will be added together, for a total of 800 possible pts. Letter grades will be assigned on the traditional 90-80-70 scheme e.g.:
≥90.00% guarantees A- or better and so on.

A grade of 60.00% or lower is not considered a passing grade for this course.

Getting Help with Chmy 123

- Dr. Martin's office hours or make an appointment to fit your schedule
- TA (teaching assistant) office hours, to be announced
- Study Jam Mon and Wed evenings, 6:30-9 pm 2nd floor dining room of the UC
- private tutors may be available.
- Learning Assistant hours (to be decided – probably Wed and Friday from 10-10:50 pm)

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>. Representing another person's work as your own – including work from the internet(Google, Wikipedia etc) – is academic misconduct and will be treated accordingly.

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 Disability Services for Students (Lommasson Center room 154, 406-243-2243).

Semester Schedule

Please note that University of Montana academic policy sets a deadline of the 45th instructional day to drop courses. 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 8/29

T 8/30 course mechanics, how to succeed in biochemistry
W 8/31 lec 1: alkanes & isomers
R 9/01 lec 1: alkanes & isomers
F 9/02 lec 1: alkanes & isomers

No recitation.

M 9/05

T 9/06 lec 2: functional groups
W 9/07 lec 2: functional groups
R 9/08 lec 2: functional groups
F 9/09 review session

Labor Day, no classes

M 9/12

T 9/13 recitation 1
W 9/14 lec 3: polarity, intermolecular attraction & solubility
R 9/15 Exam I
F 9/16 lec 3: polarity, intermolecular attraction & solubility

M 9/19

T 9/20 recitation 2 [*last day to make changes via Cyberbear*]
W 9/21 lec 3: polarity, intermolecular attraction & solubility
R 9/22 lec 4: acid-base chemistry
F 9/23 lec 4: acid-base chemistry
review session

M 9/26

T 9/27 recitation 3
W 9/28 lec 4: acid-base chemistry
R 9/29 Exam II
F 9/30 lec 5: redox chemistry
lec 5: redox chemistry

M 10/03

T 10/04 recitation 4
W 10/05 lec 5: redox chemistry
R 10/06 lec 6: chirality
F 10/07 lec 6: chirality
review session

M 10/10

T 10/11 recitation 5
W 10/12 lec 6: chirality
R 10/13 Exam III
F 10/14 lec 7: linkages
lec 7: linkages

M 10/17

T 10/18 recitation 6
W 10/19 lec 7: linkages
R 10/20 lec 7: linkages
F 10/21 lec 8: carbohydrate chemistry
review session

M 10/24	recitation 7
T 10/25	lec 8: carbohydrate chemistry
W 10/26	Exam IV
R 10/27	lec 9: carbohydrate biology
F 10/28	lec 9: carbohydrate biology
M 10/31	recitation 8 [<i>last day to drop classes</i>]
T 11/01	lec 9: carbohydrate biology
W 11/02	lec 10: lipids
R 11/03	lec 10: lipids
F 11/04	No class
M 11/07	recitation 9
T 11/08	Election Day – no classes
W 11/09	lec 10: lipids
R 11/10	lec 10: lipids
F 11/11	Veterans Day – no classes
M 11/14	recitation 10
T 11/15	review session
W 11/16	exam V
R 11/17	lec 10: lipids
F 11/18	lec 11: proteins
M 11/21	recitation 11
T 11/22	lec 11: proteins
W 11/23	Thanksgiving Break
R 11/24	"
F 11/25	"
M 11/28	recitation 12
T 11/29	lec 11: proteins
W 11/30	lec 12: enzymes
R 12/01	lec 11: proteins
F 12/02	review session
M 12/05	recitation 13
T 12/06	lec 11: proteins
W 12/07	exam VI
R 12/08	lec 12: enzymes
F 12/09	worksheets for final exam
M 12/12	Final Exam Help Session and semester wrap-up
F 12/16	Final Exam 10:10am - 12:00pm No early exams will be given