Professor Kent Sugden  
Office hours: M, W 10-11 am,  
Email: Kent.Sugden@umontana.edu  
Office: Chem Building 306

Course Description  
CHMY 123 Introduces the student to “Organic Chemistry” though the study of  
the nomenclature, chemical properties and physical properties of simple organic  
compounds. From this background we will focus on those organic compounds that are  
found in biological structure, metabolic function and information transfer that  
characterizes life as we know it “Biochemistry”.

Learning Outcomes  
1. The student will master systematic nomenclature for basic organic compounds.  
2. Intermolecular interactions will be discussed to show how they help define the  
structure and function of organic and biomolecules.  
3. Acid/Base ionization of functional groups will be explored with specific emphasis  
on amino acids, proteins, and nucleic acids to show structure/function impacts.  
4. Biochemical mechanisms of information transfer will be explored (replication,  
transcription, and translation).  
5. The role of thermodynamics and kinetics as it pertains to enzyme catalyzed  
reactions will be discussed.  
6. The role of oxidation-reduction reactions in metabolism will be  
7. Key energy requiring and energy yielding steps in metabolism will be highlighted.  
8. Oxidation of organic substrates as coupled to the production of chemical energy  
in biological systems will be covered.

Pre-requisites and Co-requisites for CHMY 123: 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 CHMY123. Most majors that require CHMY  
123 also require CHMY 124 and thus is listed as a co-requisite.

Course Materials  
- Solutions Manual: Answers to even numbered back-of-the-chapter problems are  
found at the end of the textbook. If you wish the answers to all the problems  
there is a student solutions manual available (this is optional).  
- Molecular Model Kit: CHMY 123 model kit, available in UM bookstore.

Assigned readings and problems are posted on Moodle.  
Lecture Notes: The lecture notes/powerpoints for each week will be posted on Moodle
Study Guides: Study Guides will be posted on Moodle before each exam. Exams are based on the new material covered from the previous test but the very nature of the chemical sciences is that this knowledge is cumulative.

Weekly Schedule
Recitations: M afternoons see information for individual sections (starts Sept 10)
Lectures: MWF (3 days) 9:00-9:50pm ISB 110

Recitation Exercises
Recitation exercises are model based tutorials followed by a short 10 pt closed-book quiz. Please bring your textbook, class notes and model kit to recitation for the tutorial. Please go to the recitation section in which you are officially enrolled as seating is limited. There are twelve 10 pt quizzes. The lowest three will be dropped for a total of 90 possible pts from the recitations. There are no make-up recitations.

Homework
Homework problems will be suggested for each chapter that is covered in lecture. The problems will not be handed in or graded. The problems in the book will be used as a basis for the recitation quizzes and exam questions. Thus, you are highly recommended to do them. A solutions manual is available that gives answers to all the problems. Your textbook only has answers to the odd numbered problems.

Exams
Exams are multiple choice, generally 25 questions worth 4 pts each (see calendar in back for exam dates). Help sheets, periodic tables, calculators and any other electronic devices are not permitted unless pre-approved. There are 5 x 100 point midterm exams. The lowest of these exams will be dropped, for a total of 400 possible pts. Missing an exam for any reason, legitimate or otherwise constitutes your lowest exam score.

Final Exam: The final exam is comprehensive and worth 200 pts (and cannot be dropped). The final exam is scheduled for Wednesday, Dec 12, 8:00 am –10:00 am.

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

Letter Grades
The points from best 4 exams (400) + final exam (200) + best 9 quizzes from recitations (90) for a total of 690 possible pts. Letter grades will be assigned primarily using the traditional 90-80-70-60; A-B-C-D format. The use of + and – grading is at the discretion of the Professor and will only be used to award (and not punish) students whose averages are on the line between two grades. The Professor reserves the right to lower the grading curve i.e. drop the average needed for an A/B etc.
Getting Help with CHMY 123
▪ TA (teaching assistant) for your recitation section has office hours, to be announced.
▪ Study Jams (regular study groups led by a student tutor) http://www.umt.edu/oss/for_students/tutoring.php
▪ check the TRIO website to find out if you qualify for TRIO assistance http://www.umt.edu/triosss/apply.php#Eligibility
▪ names of private tutors can be found through the Office of Student Success http://www.umt.edu/oss/.

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/student-affairs/dean-of-students/default.php

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 to arrange accommodations. 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).

UM Policies on drop/add and grade changes
According to UM academic policy, the deadline for dropping courses is the 45th instructional day. After that day, documentation of special circumstances is required to drop a course.

UM policy allows you to change your grade option (typically occurs when students are not doing well and they change from traditional letter grade to credit/no credit option) up to the last regular day of classes, Dec 07, 2018.

Semester Schedule (see next page for daily calendar of lectures and other important events)

The approximate lecture order is given in the calendar on the next page. We start at Chapter 19 and go sequentially through to the end of the book (Chapter 35). Chapter 32 is omitted. Portions of some chapters may be omitted at the instructors discretion.

The dates given in the calendar are subject to change based on the pace of lecture. At times we may be slightly ahead or slightly behind the stated chapter. The goal however is to cover approximately 3 chapters prior to testing.
### 2018-2019 Calendar

#### Yearly Calendar

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<th>November '18</th>
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<th>January '19</th>
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- **August 27**: Classes Start
- **Light Green**: Classes are Lecture Days
- **Dark Blue**: Classes are Testing Days
- **Red**: Red are Holidays/No Class
- **Light Blue**: Light Blue is Finals Week

#### Approximate Lecture/Test Dates

**August 27-Class Overview**
- Aug 29-Sep 5: Overview
- Sept 7-10: Chapter 20
- Sept 12-14: Chapter 21
- Sept 19: Test #1: Chapt's 19,20,21
- Sept 17-21: Chapter 22
- Sept 24-26: Chapter 23
- Sept 28-Oct 1: Chapter 24
- Oct 5: Test #2: Chapt's 22,23,24
- Oct 3-8: Chapter 25
- Oct 10-12: Chapter 26
- Oct 15-17: Chapter 27
- Oct 19-22: Chapter 28
- Oct 24: Test #3: Chapt's 25,26,27
- Oct 26-29: Chapter 29
- Oct 31-Nov 2: Chapter 30
- Nov 7: Test #4: Chapt's 28,29,30
- Nov 9-14: Chapter 31
- Nov 16-19: Chapter 33
- Nov 26-28: Chapter 34
- Nov 30: Test #5: Chapt's 31,33,34
- Dec 3-5: Chapter 35
- Dec 7: Review for Final
- **Final**: Dec 12: 8:00 am-10:00 am