Chemistry 1082
Chemistry for the Life Sciences II
Spring 2024
T/Th 11:15 – 12:25pm, 100 Smith Hall

Instructor: Dr. Angela Perkins
Email: aperkins@umn.edu (best way to contact me)

Website: All class information will be posted on the course website - access through https://canvas.umn.edu

Office Hours: See Canvas Site as dates/times will be set after the first week of the semester.
If office hours don't work for you or you want to be sure to chat one-on-one, please email to set up an appointment.

General Course Information: Chemistry 1082 with accompanying 1086 lab is the second semester in a three-semester sequence of courses designed to provide a strong chemistry background for students pursuing degrees and careers in the life sciences. Upon completion of these courses, the desired outcome is that the student (1) can identify, define and solve problems; (2) can locate and critically evaluate information; (3) has mastered a body of knowledge and a mode of inquiry; (4) can communicate effectively; and (5) has acquired the skills for effective and life-long learning.

Prerequisite Material: To register/remained registered in this course, you must meet all of the following criteria:

1. Registration in both 1082 (lecture) and 1086 (lab) during the same semester is required
2. Completed with a C- or better in CHEM 1081, 1061 or 1071H (lecture)
3. If you do not meet these criteria, you should report your situation to the staff in Smith 115 (624-0026) immediately. They handle all registration issues pertaining to this course.

Course Materials: Because of the nature of our three-semester chemistry sequence we will be working out of two different textbooks this semester. We will be completing a few topics related to general chemistry using the *Interactive General Chemistry, Atoms-First* text book (listed below). We will also be working using an organic chemistry textbook (Karty, listed below).

Textbooks and Online Homework: The general chemistry textbook and ALL online homework is being delivered via Inclusive Access. This gives you access to the required e-book and Achieve online homework before the first day of classes. The cost ($50.25) for the e-book and Achieve homework will be charge to your student account after the first day of classes. Contact the bookstore directly before **January 26th** if you wish to opt-out this delivery method.

> ***General Chemistry E-Book:*** *Interactive General Chemistry, Atoms-First*
> Authors: Jessica White, Brian Anderson, Brandon Green, & Mildred Hall; Publisher: Macmillan Publishing

The organic chemistry textbook is also be delivered via Inclusive Access. The cost ($96) for the e-book will be charged to your student account after the first day of classes. The access for this textbook will be for 2-years, which will get you through CHEM 2081, where this book will be utilized exclusively.

> ***Organic Chemistry Textbook:*** *Organic Chemistry: Principles and Mechanism, 3rd Ed.*
> Author: Joel Karty; Publisher: Norton

A solutions manual for all of the problems in the organic chemistry textbook is available from Norton Publishing. The solutions manual is highly recommended as the best way to learn organic chemistry is to work problems and having access to the solutions is a great way to check your answers to make sure that you are understanding the concepts correctly. You can find the link to purchase the solutions manual on the Canvas site.

Calculators: The presence and use of graphing and/or programmable calculators on a quiz or exam is FORBIDDEN, this includes the calculator on your cell phone, smarty phone or other electronic devices. **Any one-line display calculator is allowed.** The **TI-30XA** is the suggested calculator for this and all CHEM 1xxx courses. The bookstore stocks this calculator for around $10. The **TI-30X IIS** is an acceptable two-line calculator. Many other two-line calculators are programmable and would therefore not be allowed. **To make it easier for the proctors, these are the only two allowed calculators that can be used for quizzes & exams in this class. NO EXCEPTIONS**

Molecular Model Kit: A molecular modeling kit is highly encouraged in this course, especially as in discussions of organic structure. A kit is sold in the bookstore, but any chemistry "ball and stick type" molecular modeling kit is acceptable.

Calculating Final Grades: Your final grades will be calculated based on the 4 in-class exams, the final exam, the online assignments and in class participation as described below.

Final Grade:	Four In-Class Exams (110 points each)	440
	Final Exam	190
	Canvas Quizzes (8 highest)	80
	Online Homework	125
	Check Point Surveys	15
	Total Points possible	850 pts
	iClicker Bonus (participation)	*up to 40 pts*

Grades: Grade ranges for this course will be assigned as follows: **A: > 90.0% (> 765 pts); A-: 86.0-89.9% (731-764 pts); B+: 82.0-85.9% (697-730 pts); B: 78.0-81.9% (663-696 pts); B-: 74.0-77.9% (629-662 pts); C+: 69.0-73.9% (586-628 pts); C: 64.0-68.9% (544-585 pts); C-: 60.0-63.9% (510-543 pts); D+: 55.0-59.9% (467-509 pts); D: 50.0-54.9% (425-466 pts).** Historically, using these grade ranges. about 60% of the class will receive some type of A or B. These grade ranges may be lowered if quiz/exam averages are lower than expected but they will not be raised (go up) if averages are high.

Exams: Four exams (75 minutes each) will be given on scheduled Tuesdays during the regularly scheduled class time (11:15-12:30pm). The final exam will be 2 hours at the day/time determined by the UMN Final Exam Schedule.

Exams will be completed in person. See the Exam page on Canvas for further information. Exam dates can be found on the lecture schedule. All exams will be closed-book and closed-notes with no other study aids are permitted. You must have your student ID (or other form of photo ID) with you to take the exams.

Canvas Quizzes: Over the course of the semester there will be quizzes for you to complete on Canvas. This is to help you gauge understanding of the material between exams. These will be completed using Canvas and can be done anytime during the open quiz window which will run from 8:00am on Monday until noon (12:00pm) on Wednesday. The window closes at **12:00pm on Wednesdays** and Canvas will kick you out if you are still working. You will have 2 attempts to complete each quiz and only your highest quiz score will be used in your grade calculation. You will find the due dates for these quizzes on the lecture schedule.

There will be 10 quizzes over the course of the semester, but only the highest 8 scores will count towards your final grade. There will be no excused absences or extensions given on Canvas Quizzes, two quizzes will be dropped to allow for illness or forgetting to take the quiz during the open window. You will have a Canvas quiz due on Wednesday at noon almost every week, so please plan accordingly.

These quizzes are to gauge your understanding of the basics of the material and not on your ability to collaborate with others to get the answer. While no one will be monitoring your quiz, no Proctorio, you will agree at the start of the quiz to be working independently and that the answers provided are your own work. Additionally, any posting or emailing of quiz questions to anyone within this class or to any external content site is considered a violation of UMN Academic Policy.

Achieve Homework: You will have an online homework assignment due almost every week on **Wdnesdays at 11:59pm** related to the material that we are covering in class. You can access this homework by activating your Macmillan Learning Account. Directions for activating your account can be found on the Canvas Course Materials page. All graded assignments will be listed and submitted on this website under Assignments. These assignments are for your benefit and are designed to help you to keep pace with the material that we are covering in lecture. Obtaining a 90% overall by the end of the semester on the Achieve Homework will give you full credit at the end of the semester. A maximum of 125 pts will be assigned for Achieve homework, so if your score on these assignments exceeds 125 pts, your homework points will be adjusted accordingly.

Late Homework Submissions: Homework assignment in Achieve will remain open for 2 weeks after the due date for you to complete as needed. No late penalty will be assessed during this two-week window. **No additional extensions will be given.** All Achieve homework assignments must be completed by the last day of classes of the semester (Monday, April 29th at 11:59pm). No extensions beyond this point will be given.

Checkpoint Surveys: Three times during the semester you will be asked to fill out a reflection survey (self-assessment) to think about how you are planning to work (Intro Survey), or are working in the class this semester to get your desired grade. These surveys are to get you to think about your study strategies going into the course (Intro Survey) and any modifications or changes that may need to be done over the course of the semester to help you achieve your goal in this class. These surveys will all be available in Achieve. They may seem long, but really they are mostly MC type questions and shouldn't take more than 10 minutes to complete. While I will not be focusing on specific answers from you, I will be looking at overall impressions from the class and using this to inform me about how students are feeling about the class and how it is progressing over the semester. An honest self-assessment is a good way to think about changes that you can make if you are looking for grade improvement over the semester.

Exam Absences: A student can be excused from one midterm exam for a true emergency, serious illness, or University sponsored activity. The students should contact the instructor as soon as circumstances allow and appropriate documentation must be provided (Dr's note, etc). If circumstances are deemed as appropriate for missing the exam, the unweighted average of all other midterm exams and of the final exam in the course will be used in place of the missed exam. If circumstances lead to a student missing more than one midterm exam, the student should immediately schedule a meeting with the instructor to discuss any available options. **There will be no late makeup exams given – NO EXCEPTIONS!!**

If you are traveling for a University sponsored activity, you may be eligible to take the exam from the road or with a University approved proctor before traveling. These situations should be brought to the attention of the instructor as soon as possible so that there is enough time to coordinate exams. Accommodations for these situations are left entirely up to the discretion of the instructor as to how you will be accommodated as sometimes the only option is an excused absence as described above. There will be NO LATE exams in these instances, only early.

The final exam can only be missed due to illness or family emergency and documentation again must be provided. However, in cases where the final exam is missed, an incomplete ("I") final grade will be assigned according to the policy outlined below.

Policy on an Incomplete (I) Grade: An incomplete grade will be assigned only when the final exam is not taken **AND** the work completed to that date is satisfactory (C- or better). An incomplete grade can only be corrected by taking a regularly scheduled 1082 final exam in the next available semester. If the final exam is not taken and/or the work completed to that date is not satisfactory, and **F** grad or an **N** grade will be given depending on whether the course is taken under the A-F or S-N grading system. **The "Agreement for Making Up and I Grade" form must be completed and signed by the Instructor, student, and a third party within 48 hours after the final exam.**

Scholastic Dishonesty Policy: "Scholastic dishonesty is any act that violates the rights of another student with respect to academic work or that involves misrepresentation of a student's own work. Scholastic dishonesty includes (but is not limited to) cheating on assignments or examinations, plagiarizing (misrepresenting as one's own, anything done by another), submitting the same or substantially similar papers (or creative work) for more than one course without consent of all instructors concerned, depriving another of necessary course materials, and sabotaging another's work." – *Classroom Grading and Examination Procedures.* College of Liberal Arts.

A student guilty of scholastic dishonesty will be awarded a grade of zero (0) for the exam involved. Additionally, the incident will be reported to the Office for Student Academic Integrity and to the college in which the student is enrolled.

As a student at the University you are expected to adhere to the Board of Regents Policy: Student Conduct Code. To review this policy see: http://regents.umn.edu/sites/regents.umn.edu/files/policies/Code_of_Conduct.pdf

How to do well in this course:

- **Be prepared for lecture.** Briefly scan the material that is going to be covered in the lectures before you come to class. It helps to have a basic knowledge of what is being discussed in class and can help you tailor questions for material you don't understand. The lecture schedule has a notation for specific sections from each chapter being covered every day.

- **Participate in Class.** Ask questions if there is something that you don't understand.
- **Study the material covered in class.** It is helpful to reread/skim the material covered in class while the lecture is still fresh in your mind. If there is something you do not understand, you should ask for help as soon as possible. On the Canvas site you can also find pre-recorded videos covering the same lecture material. This is a good place to go with questions if you missed something in class or if you were unable to attend class.
- **Work Problems.** Chemistry can only be mastered by applying concepts learned and the best way to do this is to work problems. You should be working multiple types of problems in multiple locations.
    - In-Chapter Problems: When you are reviewing the material you should look at any in-chapter practice problems. These questions are a good way to help with the basic understanding of the material.
    - Achieve Homework: You should work these problems to cement the concepts that you are learning. These problems should be worked using your notes, textbook and any other resources available.
    - Suggested practice problems: There are practice problems from the end of the textbook. Before starting these problems, make sure you understand the concepts presented in the chapter and then attempt the problems related to these concepts. I highly suggest that before you start on textbook questions that you have completed the Achieve assignment for the chapter. The best way to work the textbook problems is trying to attempt them as if you would a quiz or exam problem. Closed-book, no notes. Sometime the scariest way, but also the best way to determine what you know, is to try to solve a problem while staring at a blank piece of paper. To be successful on quizzes & exams you need to get to the point of being able to solve problems without getting clues/hints from your book or notes. If you want to be sure that you are working problems correctly, you need to be able to check your answers. Information about the solutions manual can be found on the Practice Problems page.
- **Participate in a study group.** Study groups are an effective way of succeeding in this class. Forming a group of 2-3 other students from the class can be a great tool for understanding what you have learned and discover with which concepts you are still struggling. Do not go to the study group hoping to learn the material you have not studied, rather complete your studying and take questions to the study group.
- **Get help early.** Whether this is attending virtual office hours, visiting the virtual tutor room, having discussions with peers, or emailing your professor, you need to find answers to your questions. The chemistry tutor room will be holding virtual office hours at regularly scheduled time slots. Dr. Perkins will also be holding virtual office hours. This office hours are open for anyone to join at any time. The link and day/time can be found on the Canvas Home page. If office hours do not work for you or you want to be sure to have a private one-on-one meeting, email Dr. Perkins to set something up. Remember, this class moves very quickly and we cover a lot of material each week, so if you get lost you need to be proactive about getting the help that you need.

Tutor Room: There will be a tutor room (both in person and virtual) that will be open throughout the semester starting on January 22nd. This tutor room is staffed by departmental graduate students, who also serve as the 1086 lab TA's. You can find the schedule, information and zoom links on the course Canvas site.

Private Tutors: The department also maintains a list of people who are available for private tutoring. This list can be obtained from 115 Smith Hall during business hours or you can find it on the course Canvas site. The cost/hour for a private tutor is negotiated between you (the student) and the tutor.

Student Academic Success Services: The Student Academic Success Services (SASS) promotes academic success through individual consultation, courses, workshops, and self-help materials (on their website). They offer tips on managing text anxiety and juggling time demands.

Student Mental Health: As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. University of Minnesota services are available to assist you with addressing these and other concerns you may be experiencing. You may learn more about the broad range of confidential mental health services available on campus by following the link.

Policy Statements:

Overlapping and Back-to-Back Courses: Enrolling in overlapping or back-to-back courses that do not allow for enough travel time to arrive at our class meetings on time in prohibited. For more information see: http://policy.umn.edu/Policies/Education/Education/Overlappingclasses.html

Student Mental Health and Stress Management: As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. University of Minnesota services are available to assist you with addressing these and other concerns you may be experiencing. You can learn more about the broad range of confidential mental health services available on campus via http://www.mentalhealth.umn.edu/.

Teaching and Learning: The materials provided in this course are intended only for the students officially enrolled in this section and are to be used to learn and practice the course material. Disseminating class notes, videos, exams, etc.… beyond the classroom community or accepting compensation (in the form of cash or trade, such as access to study website) undermines instructor interests in their intellectual property while not substantially furthering instructor and student interests in effective learning. Such actions violate shared norms and standards of the academic community and are not allowed. For additional information please see http://policy.umn.edu/Policies/Education/Education/Studentresp.html

Disability Accommodations: UMN views disability as an important aspect of diversity, and is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations. If you have, or think you have, a disability in any area such as, mental health, attention, learning, chronic health, sensory, or physical, please contact DRC (https://diversity.umn.edu/disability/), to arrange a confidential discussion regarding equitable access and reasonable accommodations. If you are registered with the DRC and have a letter dated for this semester, please contact me via email and send your letter so that we can review how the accommodations will be applied in this course.

Sexual Harassment:
http://regents.umn.edu/sites/regents.umn.edu/files/policies/SexHarassment.pdf

Equity, Diversity and Equal Opportunity:
http://reagents.umn.edu/sites/regents.umn.edu/files/policies/Equity_Diversity_EO_AA.pdf

Lecture Schedule

Week # Dates	Material Coverage	Tuesday	Quiz/Assignments Due Wednesdays	Thursday
Week #1 1/15 - 1/19	Chapters 1, 2, & 3 (Karty) (1.1-1.13, 2.1-2.8, 3.1-3.9)	Introduction 1.9-1.13	Achieve: Intro Survey	2.2-2.3, 3.6-3.8 A.1-A.2
Week #2 1/22 - 1/26	Interchapter A (Karty) (A.1-A.7) Interchapter B (Karty) (B.1-B.2) Chapter 4 (Karty) (4.1-4.14)	A.3-A.7, B.1-B.2	Quiz #1 Achieve: Ch 1, 2, 3	4.1-4.7
Week #3 1/29 - 2/2	Chapter 4 (Karty) (4.1-4.14) Chapters 5 (Karty) (5.1-5.12, 5.13 conceptual)	4.8-4.14	Quiz #2 Achieve: Ch A, B, 4	5.1-5.6
Week #4 2/5 - 2/9	Chapters 5 (Karty) (5.1-5.12, 5.13 conceptual)	5.7-5.13	Quiz #3 Achieve: Ch 5	**Exam I Chapters - Karty: 1-5, A & B**
Week #5 2/12 - 2/16	Chapter 16 (IGCaf) (16.1-16.7)	16.1-16.4	Achieve: Eq Review & Reflection #1	16.5-16.7
Week #6 2/19 - 2/23	Chapter 17 (IGCaf) (17.1-17.4)	17.1-17.2	Quiz #4 Achieve: Ch 16	17.3-17.4
Week #7 2/26 - 3/1	Chapters 6 (Karty) (6.1-6.9)	6.1-6.4	Quiz #5 Achieve: Ch 17	6.5-6.9
3/4 - 3/8	**SPRING BREAK**			
Week #8 3/11 - 3/15	Chapter 14 (IGCaf) (14.1-14.6)	14.1-14.3	Quiz #6 Achieve: Ch 6	**EXAM II Chapters - IGCaf: 16,17 Karty: 6**
Week #9 3/18- 3/22	Chapter 14 (IGCaf) (14.1-14.6) Chapters 7 (Karty) (7.1-7.3, 7.5-7.9)	14.4-14.6	Achieve: Reflection #2	7.1-7.3, 7.5-7.6
Week #10 3/25 - 3/29	Chapters 7 (Karty) (7.1-7.3, 7.5-7.9) Chapters 8 (Karty) (8.1-8.7)	7.7-7.9	Quiz #7 Achieve: Ch 14	8.1-8.4
Week #11 4/1 - 4/5	Chapters 8 (Karty) (8.1-8.7)	8.5-8.7	Quiz #8 Achieve: Ch 7 & 8	**EXAM III Chapters - Karty: 6, 7, & 8**
Week #12 4/8 - 4/11	Chapter 9 (Karty) (9.1-9.13, 2.9)	2.9, 9.1-9.7		9.8-9.13
Week #13 4/15 - 4/19	Chapter 10 (Karty) (10.1-10.8 & 10.10-10.12)	10.1-10.5	Quiz #9 Achieve: Ch 9	10.6-10.8
Week #14 4/22 - 4/26	Chapter 10 (Karty) (10.1-10.8 & 10.10-10.12)	10.10-10.12	Quiz #10 Achieve: Ch 10	**EXAM IV Chapters - Karty: 9 & 10**
4/29 - 5/3	**Final Exam - Friday, May 3rd 1:30-3:30pm** (Cumulative)			