

College Chemistry I

Chem 1450, Fall 2019

Lecture (Laney-Manion 104): MWF 12:00 pm – 12:50 pm

Lab (Laney-Manion 206): T 8:00 am – 10:40 pm (Section 19159)

T 10:50 am – 1:30 pm (Section 19186)

T 2:40 pm – 5:20 pm (Section 21429)

Instructor: Dr. Lei Yang

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Website: <https://faculty.uca.edu/lyang/Site/Home.html>

Office hours: Monday, Wednesday and Friday, 9:00 am-11:00 am

Use this time. It works best if you come to my office prepared with specific questions about lecture, lab or homework. Other times are available by appointment.

Text: *Chemistry – A Molecular Approach* (4th Ed.) by Nivaldo J. Tro, Prentice Hall (c) 2017.

Grading	Possible points^a
Nine 20-minute online quizzes (15 pts each)	120
Ten homework assignments (20 pts each)	180
Ten experiments/lab work (20 pts each)	180
Three 50-minute exams (100 pts each)	200
Final exam (Dec. 12th, Wednesday, 11:00 am) (200 pts)	200
TOTAL POSSIBLE	880

^a The **lowest** lab, quiz, homework assignment and exam **will be dropped**. Final exam will not be dropped.

Grades: A = 792.00 – 880 points

B = 704.00 – 791.99

C = 616.00 – 703.99

D = 528.00 – 615.99

F < 528.00

Course (1). To supply students with the basic ideas surrounding the nature of chemistry.

Goals (2). To help student to develop the ability to think critically.

(3). To increase the ability of students to apply problem solving techniques to similar but not identical problems.

(4). To adequately prepare students for more advanced chemistry courses.

Important Dates November 8 (Friday): Last day to withdraw with a W grade

Prerequisite ACT mathematics score of at least 21 or corequisite/prerequisite of MTAH 1390

Policies 1. Attendance

People who miss classes typically do poorly in this course. Do not be one of these people. **Three consecutive unexcused absences will result in a W grade.** It is the student's responsibility to obtain information covered during an absence.

2. Online quizzes

There are total nine online quizzes on Blackboard, and they will be posted with deadlines according to our progress on lectures. Each quiz is 15 points and you have 20 minutes to finish.

3. Homework Assignments

Homework problems are representative of the material discussed in lecture and the text will be assigned once we start a chapter. You will have one to two weeks to finish it. **The homework assignments will be graded.** Please submit the hard copy with your name before deadline. **An electronic version of your homework assignment won't be accepted.** The assigned problems represent a minimum workload for mastery of course material. You will not succeed in this class if you do not regularly work and understand all of these problems.

4. Office Hours

This time is specifically set-aside for you to ask questions and receive help on course material. Use this time! If you cannot make the scheduled times, make another arrangement with me.

5. Makeups

Makeup labs, quizzes, exams or homework assignment will **NOT** be offered except in the following extraordinary circumstances:

- (1) Medical emergency of the student
- (2) Family emergency
- (3) UCA student athletes' absences due to Southland conference games.

Proper documentations with the signatures from medical doctors, parents and team coach are required before the arrangement of makeup. A missed lab, quiz, exam or homework assignment without any excuses will be dropped as your lowest score if that's the only one you missed.

6. Three 50-minute Exams

- (1). The three 50-minute exams will cover the material discussed in class, and problems in the homework. Material not covered in lectures or the homework will not be on the exams (except insofar as it can be deduced from material that is included).
- (2). Smart phones or other electronic communication devices are NOT allowed during exams.
- (3). Calculators **cannot** be shared among students during exams.

7. Final exam (Dec. 11th, Wednesday, 11:00 am-1:00 pm, 200 points)

- (1). Final exam is a comprehensive exam.
- (2). Final exam **cannot** be rescheduled unless students have the situation(s) mentioned in 5.
- (3). After the final exam, homework and lab assignment will not be accepted. In addition, no extra work will be provided to boost grades after final exam.

8. Deadline

All the homework assignments, prelab assignments and lab assignments should be turned in before the deadline. If you turned in later because of family or medical emergency or conference games, proper documents with authorized signatures should be presented. Otherwise the assignment won't be accepted.

9. Regrade

All regrade requests on exams, quizzes, lab reports and homework should be made to the instructor **within two weeks** after the grades posted on Blackboard. When inquiring about a possible regrade, please do **NOT** make any marks on the item in question.

10. Videos

Videos will be posted on blackboard to review the lecture materials covered during the past week. The purpose of the videos is to provide more examples and practice to enhance the understanding. These videos cannot be used to replace lectures.

11. Last three minutes and discussion board

At the end of each lecture, three minutes will be reserved for you to try one or two small questions based on the lecture materials. You can also write any questions you may have on the sheet. The sheets will be collected and the questions will be answered on our discussion board on Blackboard. This discussion board is open to everybody to discuss lecture materials, labs, homework, exam et al anonymously.

12. Academic Integrity Statement:

The University of Central Arkansas affirms its commitment to academic integrity and expects all members of the university community to accept shared responsibility for maintaining academic integrity. Students in this course are subject to the provisions of the university's Academic Integrity Policy, approved by the Board of Trustees as Board Policy No 709 on February 10, 2010, and published in the Student Handbook. Penalties for academic misconduct in this course may include a failing grade on an assignment, a failing grade in the course, or any other course-related sanction the instructor determines to be appropriate. Continued enrollment in this course affirms a student's acceptance of this university policy.

13. Disabilities Act Statement:

The University of Central Arkansas adheres to the requirements of the Americans with Disabilities Act. If you need an accommodation under this Act due to a disability, please contact the UCA Office of Disability Services, 450-3613.

14. Building Emergency Plan Statement:

An Emergency Procedures Summary (EPS) for the building in which this class is held will be discussed during the first week of this course. EPS documents for most buildings on campus are available at <http://uca.edu/mysafety/bep/>. Every student should be familiar with emergency procedures for any campus building in which he/she spends time for classes or other purposes.

15. Title IX Disclosure

If a student discloses an act of sexual harassment, discrimination, assault, or other sexual misconduct to a faculty member (as it relates to "student-on-student" or "employee-on-student"), the faculty member cannot maintain complete confidentiality and is required to report the act and may be required to reveal the names of the parties involved. Any allegations made by a student may or may not trigger an investigation. Each situation differs and the obligation to conduct an investigation will depend on those specific set of circumstances. The determination to conduct an investigation will be made by the Title IX Coordinator. For further information, please visit: <https://uca.edu/titleix>.

15. Blackboard:

UCA Blackboard offers you a place to receive announcements, find course materials and syllabus, find grades and locate other material related to a successful venture into college chemistry I. By virtue of registering for this course, you are enrolled in the Blackboard portion of the course. To access the site you must go through My UCA website.

Step a. Go to the UCA homepage (www.uca.edu) and log into My UCA.

Step b. Once in My UCA, click Blackboard.

Step c. Click on College Chemistry I.

Step d. Click the folder you want to view.

Study suggestions

Organize your study time to prepare yourself to learn the most from the lectures. This means *keeping up with the assigned homework problems on a lecture-by-lecture basis*. If you get several topics behind, the lectures probably won't seem to make much sense. A good habit is to do the reading and at least some of the problems associated with the previous lecture, and then skim the reading for the next lecture. If you come to the lectures prepared, you will find that they can considerably reduce the study/reading/problem-solving time that you need to devote to Chem 1450 outside of class.

Free tutor program

Begins on September 6th. Tuesday and Thursday 5:30-7:30 pm every week in Laney-Manion 103. Take advantage of this program!

Tentative Lecture and Exam Schedule

Date		Chapter: topics
Aug 23	F	Syllabus
26	M	Ch 1. Matter and Measurement
28	W	
30	F	
Sep 2	M	Labor day holiday, no class
4	W	
6	F	Ch 2. Atoms and Elements
9	M	
11	W	
13	F	
16	M	Exam 1
18	W	Ch 7. The Quantum-Mechanical Model of the Atom
20	F	
23	M	
25	W	Ch 8. Periodic Properties of the Elements
27	F	
30	M	
Oct 2	W	Ch 3. Molecules, Compounds and Chemical Equations
4	F	
7	M	
9	W	
11	F	
14	M	Exam 2
16	W	Ch 9. Chemical Bonding I: The Lewis Models
18	F	Fall Break
21	M	
23	W	Ch 10. Chemical Bonding II: Molecular Shape and Bonding Theories
25	F	
28	M	
30	W	
Nov 1	F	Ch 4. Chemical Quantities and Aqueous Reactions
4	M	
6	W	
8	F	
11	M	
13	W	Exam 3
15	F	Ch 6. Thermochemistry
18	M	
20	W	
22	F	
25	M	Ch 5. Gases
27	W	Thanksgiving Holiday
29	F	Thanksgiving Holiday
Dec 2	M	
4	W	
6	F	Study day, no class
11	W	11:00 am – 1:00 pm Comprehensive Final Exam

Tentative Laboratory Schedule

Date	Lab Topic
August 27	No lab
September 3	Lab 1-Ch 1. Separation Techniques
September 10	Lab 2-Ch 1. Density of Materials
September 17	Lab 3-Ch 1. Measurements
September 24	Lab 4-Ch 7. Atomic Emission Spectra
October 1	No lab
October 8	Lab 5-Ch 3. Hydrates
October 15	No lab
October 22	No lab
October 29	Lab 6-Ch 9 and 10. Molecular Geometry and Bonding
November 5	No lab
November 12	Lab 7-Ch 4. Types of Chemical Reactions and Equations
November 19	Lab 8-Ch 4. Acid-Base Titrations
November 26	Lab 9-Ch 6. Thermodynamics
December 3	Lab 10-Ch 5. Gas Law
December 10	Final Week, no lab

Lab Manual Lab manuals will be posted on the Blackboard. **Bring a copy with you each time.** Make sure you bring the correct lab handout.

Lab Work You will work in a small group with maximum four members, and you should actively participate in the experiments. For the total 20 points of each lab, 5 points will be from participation of experimental work, which includes but are not limited to collection of data, waste disposal, glassware clean, data analysis and post-lab question discussion. Any passive behavior, which includes but are not limited to using smartphone to browse social media, texting and doing other course work, will result in an oral reminder from the instructor only ONCE. If the student(s) received the second reminder, 5 points will be deducted from your total lab grade (total 20 points), which means the maximum points the student(s) will receive is 15 points. Students have to physically perform the experiments to get lab credit. No lab will be offered if students were 30 minutes late.

Pre-lab Assignments **Individual** prelab assignment is due before each lab session begins. A portion of the points for each experiment is allotted to the prelab (5 pts, 25% of total points).

Lab Safety You must use appropriate safety goggles when working in lab. Safety goggles are personal protective equipment and it is the responsibility of the student to bring to lab each time. Your goggles should meet the ANSI Z.87 standard for laboratory eye protection. Specifically they must have side and top shields to protect your eyes from chemical spills. Refusing to wear safety goggles will result points deducted from the lab total, or dismissal from the lab and a zero for the lab score. No food, drink, open-toe shoes and short pants will be allowed in labs.

Lab Grade For most labs, there are four components^a:

- 1) Individual pre-lab assignment (5 points).
- 2) Data sheets/observations (5 points)^b.
- 3) Post-lab assignment (5 points)^b.
- 4) Participation (5 points).

^aAll four parts are required to receive full credit.

^bFor datasheets/observations and post-lab assignments, you have the flexibility to turn in either an individual package or a group package. Individual package must include all individual datasheets/observations and post-lab assignments without sharing copies. For a group package, only one copy with all group members' names is required.

How to check your quiz grade, your quiz work and my comments on Blackboard:

Step 1. Click “My Grades” (red cycle) then click the quiz title (blue cycle).

ITEM	LAST ACTIVITY	GRADE
Total		-
View Description Grading Criteria		
Quiz-practice Test	Jan 5, 2018 12:16 PM GRADED	6.00000 /15
Quiz 1-syllabus Test	DUE: JUL 11, 2017 UPCOMING	- /15
Quiz 2 (Chapter 11) Test	DUE: JUL 14, 2017 GRADED	4.00000 /15
Quiz 3 (Chapter 12) Test	DUE: JUL 16, 2017 GRADED	-0.00000 /15
Quiz 4 (Chapter 13) Test	DUE: JUL 21, 2017 UPCOMING	- /15

Step 2. You can see the quiz grade on your right side (red cycle). Click it.

Date Created	Date Last Submitted or Edited	Calculated Grade
Jan 5, 2018 12:13 PM	Jan 5, 2018 12:14 PM	6

Step 3. You can see your answer (red cycle), correct answer (blue cycle) and my comments (green cycle).

Question 1 0 out of 3 points

Write the full name of element 29.

Selected Answer: Zinc **Your work**

Correct Answer: Copper **Answer**

Response Feedback: **Please be careful. The atomic number of zinc is 30, not 29.** **My comments**