

CHEMISTRY 1451
College Chemistry II
CRN: 17023, 21762
Fall 2020

INSTRUCTOR: Ahmad Zaman Qamar
OFFICE: Manion 303D
OFFICE HOURS: MW 11:00 AM to 12:00 PM
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I. COURSE INFORMATION

CLASSES: Lecture online Tuesdays (T) and Thursdays (R), 9:25 am – 10:40 am
Lab - F2F Manion 202, Fridays (F) 11:00 – 1:50 **(17023)**
Manion 202, Fridays (F) 2:00 – 4:50 **(21762)**

TEXTS: Lecture - CHEMISTRY: A MOLECULAR APPROACH; Tro, 4th Ed.
Lab - Provided by instructor

DESCRIPTION: Second of a two-course sequence beginning with CHEM 1450. Suitable for science majors and pre-professional students. Two lectures/discussions (75 min each via zoom) and 3 consecutive hours of laboratory per week.

LINK FOR ZOOM MEETING

TITLE OF MEETING: CHEM 1451 AHMAD QAMAR'S ZOOM MEETING

JOIN ZOOM MEETING

[HTTPS://ZOOM.US/J/96808751011?pwd=A0dWNY93ENL6N3dQY2s2B0w5BzR1Zz09](https://zoom.us/j/96808751011?pwd=A0dWNY93ENL6N3dQY2s2B0w5BzR1Zz09)

MEETING ID: 968 0875 1011

PASSCODE: 5QI5BN

PREREQUISITES: Grade of C or better in CHEM 1450 or equivalent.

OBJECTIVES: Upon completion of this course, the student should have gained an understanding of the following topics from chapter 11 – chapter 20

- States of matter and phase changes.
- Solutions and solubility
- Chemical kinetics and chemical mechanisms
- General equilibrium
- Acid/base chemistry and acid/base equilibria
- Thermodynamics
- Reduction/oxidation and electrochemistry
- Radioactivity and nuclear chemistry

In addition, students completing this course should have gained:

- An understanding of the most important concepts and models that chemists, and those in chemistry-related fields, use.
- The ability to apply the facts, concepts, and models of chemistry appropriately to new situations in chemistry, other sciences and engineering, and other disciplines.
- Knowledge of the many practical applications of chemistry in our society and our environment.
- Appreciation of the many ways that chemistry impacts the daily lives of everyone, students included.
- Motivation for studying in ways that help to achieve long-term retention of facts and concepts.

GRADING: Your grade for the course will be based on the number of points accumulated out of a total of 1000. The lecture will constitute 80% of your grade, with the lab making up the remaining 20%. The breakdown is as follows:

Exams (1, 2, 3)	420
Class Participation/Discussion	30
Quizzes	150
Homework (non-graded)	0
Labs	200
Final Exam	<u>200</u>
TOTAL	1000

Final grades will be assigned according to the following format:

A = 90+%
B = 80% - 89%
C = 65% - 79%
D = 55% - 64%
F = <55%

MODE OF INSTRUCTION AND COMMUNICATION

Lecture time will be used via zoom on Tuesdays and Thursdays for lecture/discussion/QA sessions of previous lectures on each topic. The link for zoom meeting will be found on blackboard and students are expected to attend live lectures and watch previously recorded videos. Attending lectures and watching recorded lectures will be part of class participation. In addition, information such as this syllabus, lecture materials, laboratory handouts, and grades will be provided via blackboard. I'll hold virtual office hours and you can also ask me to set appointments along with that to discuss further. I will communicate assignments and other information from time to time using emails and blackboard. Emails will be sent exclusively and please be advised that check your blackboard and emails regularly for course announcements.

CLASS ETHICS

Maintain classroom ethics during discussion sessions regardless of virtual or F2F format. Be respectful to others opinions and try to accommodate each other's point of view so that you can learn most effectively.

LABORATORY

The laboratory portion of the course will consist of 8 labs. Six of these will be wet labs (actual experiments), while the remaining two are worksheets. The lowest lab score will be dropped. In order to meet the physical distancing requirement, lab sections will be divided in half with each half meeting

every other week. Laboratory materials will be provided via Blackboard. The wet labs will consist of three parts: (1) a prelab worksheet; (2) a data sheet; (3) a post lab worksheet. All three components of the laboratory *must* be turned in for full credit on the lab. Although wet labs are real (not online) experiences, all lab documentation will be turned in digitally via Blackboard. The prelab should be completed online before coming to lab. This will familiarize you with the procedures to be used and any special safety precautions which need to be observed. Laboratory safety policies will be discussed in the first lab session. This will include familiarization with the safety equipment, and general policies concerning acceptable practices in the lab. All students will be required to sign a **Laboratory Safety Agreement** in which they acknowledge that they have received, understand, and agree to all of the safety requirements for the lab. This document can be accessed and signed electronically via the departmental webpage. Students who have not signed the Safety Agreement by the second lab meeting will not be allowed to work in the laboratory. **Students are required to wear safety goggles and masks in the lab.** Goggles may be purchased from the bookstore or from the ACS student affiliate (the chemistry club). Students who fail to bring their goggles and/or mask to lab will be sent home. Any student observed without either appropriate eye protection or a mask twice during any lab period will be asked to leave the lab for that period and only receive credit for the material completed to that time. Safety information on specific reagents will be discussed in those labs which use them.

Please read and sign lab safety agreement. You can access the agreement here

<https://www.uca.edu/web/forms/view.php?id=1553>

Acknowledgment of usage of KN95 Mask

<https://www.uca.edu/web/forms/view.php?id=1564>

II. LECTURE/LAB SCHEDULE, FALL 2020

Week	Lab	Target Exam Week
8/20		
8/24 – 8/28	Orientation/Safety/Sugar Content by Density (A)	
8/31 – 9/4	Orientation/Safety/Sugar Content by Density (B)	
9/7 – 9/11	Kinetics: Rate Law of Dye + Bleach (A)	
9/14 – 9/18	Kinetics: Rate Law of Dye + Bleach (B)	
9/21 – 9/25	Le Chatlier's Principle (A)	Exam 1: Sept 24, 2020 9:25-10:40 am Ida Waldran Auditorium
9/28 – 10/2	Le Chatlier's Principle (B)	
10/5 – 10/9	Solving Equilibrium Problems (Worksheet)	
10/12 – 10/16	Weak Acid Titration (A)	Exam 2: Oct 13 9:25-10:40 am

		Ida Waldran Auditorium
10/19 – 10/23	Weak Acid Titration (B)	
10/26 – 10/30	Thermodynamics of KNO ₃ Solutions (A)	
11/2 – 11/6	Thermodynamics of KNO ₃ Solutions (B)	
11/9 – 11/13	Electrochemistry (A)/Balancing Redox Equations (Worksheet)	Exam 3: Nov 12 9:25-10:40 am Ida Waldran Auditorium
11/16 – 11/20	Electrochemistry (B)/Balancing Redox Equations (Worksheet)	
11/23 – 11/27	<i>Thanksgiving Break</i>	
11/30 – 12/4	<i>No Lab</i>	
12/7 – 12/11	<i>Finals Week</i>	Final Exam TBD Comprehensive

III. POLICIES

ATTENDANCE

Students are expected to attend all scheduled classes. If a lecture is missed, the student should make every effort to obtain lecture notes for that day from a classmate. There is a definite correlation between lecture attendance and exam performance. If a student misses three (3) consecutive lectures without notifying the instructor or officially dropping the course, an automatic "F" or "W" will result.

NO MAKEUP EXAMS WILL BE GIVEN

NO MAKEUP LAB WILL BE GIVEN

*THERE ARE **NO** "EXTRA CREDIT" ASSIGNMENTS – ***DON'T ASK****

Missing an exam is *rarely* excusable. It is the responsibility of the student to provide legitimate, documented proof as to the nature of the absence within 24 hours of the absence. Whether or not the absence is excusable is left to the discretion of the instructor. Be aware that excuses such as "I was sick", or "I had to find my roommate who stayed out all night" are not acceptable.

TARDINESS

Chronic tardiness is disrespectful of the instructor and other students. As such, it is unacceptable and will not be tolerated. Any student arriving late to lab in excess of ten minutes will receive no credit for that lab exercise.

GRADING DISPUTES

If the student believes that an error in grading has been made on an exam or assignment, it is the responsibility of the student to inform the instructor of the error within 24 hours of the time when the graded exam/assignment was passed back. Requests to re-evaluate graded papers outside this timeframe will not be accepted. Assignment of course grades at the end of the semester lies *solely* within the purview of the instructor. Persistent attempts to argue for a better grade will only serve to irritate the instructor.

CELLPHONES

Cellphones must be put away and silent during lab. Cellphone usage of any type during lab (unless previously approved) is not allowed. Students **MAY NOT** use cellphones as readers for laboratory procedures during lab. Tablets and notebook computers are acceptable. This is a discourtesy to your fellow classmates and to me. Cellphones **may not** be used as calculators during exams.

ACADEMIC MISCONDUCT/PLAGIARISM

The university regards all acts of academic dishonesty as deserving severe punishment. Punishment for such acts may include receiving a failing grade for the work or course and/or being dismissed from the university.

SEXUAL HARASSMENT

Sexual harassment by any faculty member, staff member, or student is a violation of both law and university policy and will not be tolerated at the University of Central Arkansas. Sexual harassment of employees is prohibited under Section 703 of Title VII of the Civil Rights Act of 1964 and sexual harassment of students may constitute discrimination under Title IX of the Education Amendments of 1972.

These and other important policies are outlined in the *UCA Student Handbook*, which can be found at: <http://uca.edu/student/student-handbook/>. The student is encouraged to familiarize him/herself with all of the policies contained within that document.

EMERGENCY PROCEDURES

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.

AMERICANS WITH 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, contact the UCA Office of Disability Services at 450-3135.

COURSE EVALUATIONS

Student evaluations of a course and its professor are a crucial element in helping faculty achieve excellence in the classroom and the institution in demonstrating that students are gaining knowledge. Students may evaluate courses they are taking starting on the Monday of the thirteenth week of instruction through the end of finals week by logging in to my UCA and clicking on the Evals button on the top right.

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