

College Chemistry I
CHEM 1450, CRN 10303, 13060, 19000

Course Syllabus, Fall 2018

Instructor:	Dr. Kristin Dooley
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Website:	http://faculty.uca.edu/kdooley
Office Hours:	T 8:00-11:00 AM F 8:00 AM -11:00 AM <i>other times by appointment</i>
Lecture:	T R 12:15 PM -1:30 PM (Laney-Manion 102)
Lab:	W 8:00 AM -10:50 AM (13060) (Laney-Manion 206) R 8:00 AM -10:40 PM (10303) (Laney-Manion 206) F 11:00 AM -1:50 PM (19000) (Laney-Manion 206)
Required Text:	<i>Chemistry: A Molecular Approach</i> (4 th Ed.) by Nivaldo Tro
Required Materials:	calculator, goggles. (See below for details)
Lab Manual:	<i>No purchased lab manual is required for this course. You will be expected to download and print lab exercises prior to each lab.</i>

Course Description This course is required for chemistry, biology, and chemical physics majors, and for medical pre-professional tracks. This course will consist of lecture discussions as well as laboratory activities.

Prerequisite A C grade or better in high school chemistry (a full year course) with 2 units of high school algebra, or a C grade or better in CHEM 1301. Prerequisite of Math ACT of at least 21 or corequisite/prerequisite of MATH 1390.

Course Objectives The main objective in this course is to acquire a solid foundation in general chemistry by mastering skills in numerous topics that can be applied in further coursework. These topics include: chemical nomenclature, general reaction classifications, stoichiometric relationships in reactions, the interaction of energy and matter, periodic chemical and physical properties, as well as others.

Required Materials This course requires a textbook, a calculator, and goggles. I do not require you to bring your text to class, and I do not mind if you choose to share textbooks or use an online copy. A calculator should be brought to every lecture and lab period as it will be needed for participation, quizzes, lab calculations, and especially exams. Cell phone calculators will not be allowed on quizzes or exams. Calculator sharing during exams or quizzes will not be permitted. Goggles must meet the ANSI Z.87 standard for laboratory eye safety.

- Graded Work**
- Four **Exams** will be given throughout this course. The dates of these exams can be found on the Lecture Schedule. Date changes for exams will be announced at least 1 lecture meeting in advance of the test date. **No exam scores will be dropped, but your lowest score may be replaced by your final exam score if it improves your grade. If an exam is missed, it will automatically be the score replaced by your final exam score.**
 - **Quizzes** (30 Points Each) help to ensure that you are progressing through the material at a pace that sets you up for success on the exams. There are 6 scheduled quizzes throughout the semester. Expect the quiz to include problems similar to the assigned homework. The quiz will be given during the first 15-20 minutes of lecture. If you are late, you will have less time to complete the quiz. **One quiz score will be dropped.**
 - The **lab** for this course is meant to introduce you to experimental design and techniques and complement material covered in the course. You will receive a grade out of a possible 20 Points based on your performance at each lab meeting. More information about these assignments is explained in the lab section of the syllabus. **One lab score will be dropped.**
 - **Assignments** of Chapter Problems will be given on a regular basis. Although I do not take up or grade these assignments, your quizzes will often contain a problem from the current assignment.
 - The course's **final exam** will be comprehensive, and no portion of the final exam grade will be dropped. I will be using the ACS Standardized End of Course Exam as your final exam. More information about this exam and study tips will be available on the course website.
 - *Grade disputes concerning scores on specific assignments or exams should be addressed promptly. After the assignment has been returned, the student has one week to bring the problem to my attention. After that time, the grade on the assignment or exam will not be changed.*

Point Distribution	Category:	Total Points:
	Hourly Exams 4 @ 100 Points Each	400
	Quizzes 5 @ 30 Points Each	150
	Lab 10 @ 20 Points Each	200
	Final Exam 200 Points	200
	TOTAL:	950 Points

Grading Scale **A: 90-100% B: 80-89% C: 70-79% D: 60-69% F: <60%**

Grade Posting Most, if not all, of your graded work in this course will be returned to you. I will keep a record of the grades on Blackboard so that you may calculate your grade at any time. This is also a way for me to make sure that I have all of your grades recorded correctly. If you see a discrepancy between the grade you have on Blackboard and the grade on your returned assignment, bring the assignment to me so that I can correct the record.

Course Schedule

*This is a tentative schedule. Exam and quiz dates as well as content are subject to adjustment.

Aug	23	R	Syllabus, Chapter 1.1-1.1.5	
	28	T	Chapter 1.6-1.8 Conversions/Density/Sig Figs	
	30	R	Finish Ch 1 Bigger, Badder Conversion Problems	
Sept	4	T	Chapter 2.1-2.7 Atomic Theory	Quiz
	6	R	Chapter 2.8-2.9 Atomic Mass	
	11	T	Exam 1: Ch 1, Ch 2	
	13	R	Chapter 7.1-7.3 Light and Atomic Spectra	
	18	T	Chapter 7.4-7.6 Quantum Mechanics	
	20	R	Chapter 8.1-8.4 Electron Configuration	Quiz
	25	T	Chapter 8.5-8.9 Periodic Trends	
	27	R	Chapter 3.2-3.7 Building Compounds, Molecules, and Naming	
Oct	2	T	Chapter 3.8-3.10 Molar Mass and Percent Mass	Quiz
	4	R	Wrap up Ch 3.8-3.10,	
	9	T	Exam 2: Ch 7, Ch 8, Ch 3	
	11	R	NO CLASS: FALL BREAK	
	16	T	Chapter 9.1-9.9 Lewis Structures	
	18	R	Chapter 9.10 Bond Energies and Strengths	
	23	T	Chapter 10.1-10.4 VSEPR	Quiz
	25	R	Chapter 10.5-10.7 Polarity and Hybridization	
	30	T	Chapter 3.11 and 4.1-4.3 Stoichiometry/Limiting Reactants	Quiz
Nov	1	R	Chapter 4.4-4.5, Molarity/Titrations	
	6	T	Exam 3: Ch 9, Ch 10, Ch 4a	
	8	R	Chapter 4.6-4.8 Net Ionic Reactions, Double Displacement Reactions	
Friday, Nov 9: Last Day to Drop Course with a W (You MUST Officially Drop with Registrar.)				
	13	T	Chapter 4.9 Redox Reactions	
	15	R	Chapter 6.1-6.5 Thermodynamics and Heat	Quiz
	20	T	Chapter 6.6-6.9 Calorimetry and Enthalpy	
	22	R	NO CLASS: THANKSGIVING BREAK	
	27	T	Chapter 5.1-5.6 Gas Laws and Partial Pressure	
	29	R	Chapter 5.7 Stoichiometry and Gas Laws	
Dec	4	T	Chapter 5.8-5.10 Kinetic Molecular Theory	
	6	R	Exam 4: Ch 4b, Ch 6, Ch 5	
Tuesday, December 11, 11:00 AM-1:00 PM COMPREHENSIVE FINAL EXAM				

Lab Schedule

*This is a tentative schedule. Dates and content are subject to change.

	Date			Topic/Lab Title
	W	R	F	
Aug	--	23	24	NO LAB
	29	30	31	Safety/Measurements
Sept	5	6	7	Density
	12	13	14	Separation Techniques
	19	20	21	Atomic Emission and Molecular Absorption Spectra
	26	27	28	Dry Lab: Naming Practice
Oct	3	4	5	Hydrates
	10	11	12	NO LAB: Fall Break
	17	18	19	Molecular Geometry and Bonding
	24	25	26	Molecular Geometry and Bonding
Oct/Nov	31	1	2	Acid/Base Titrations
I	7	8	9	Types of Chemical Reactions and Equations
	14	15	16	Thermodynamics
	21	22	23	NO LAB: Thanksgiving Break
	28	29	30	Gas Laws
Dec	5	6	7	NO LAB: Study Day

Lab Participation/ Safety

You will usually work with 1 assigned partner in lab, and it is required that each group member actively participate in each activity. Passive participation will not be tolerated.

The Chemistry Department's Safety Agreement must be completed BEFORE you will be allowed to work in the lab.

I take lab safety very seriously. For each instance of improper lab safety, 5 points will be deducted from your score on the current experiment. The most common example of this is removing goggles from your eyes onto your forehead. More about lab safety will be covered at the first lab meeting.

Lab Material

You will not need to purchase a lab manual for this course. All of the documentation you will need for each experiment can be found online in the lab materials tab of my website. You are expected to print each document in its entirety and bring the packet with you to the lab period. Lab forms should be printed one page per sheet, in Portrait orientation. Lab forms not printed correctly will not be accepted or graded.

Lab Grades

Each lab experiment will be graded out of a total of 20 points.

Pre-Lab Assignments

Pre-lab Assignments are due **before** the lab experiment begins unless otherwise noted in class. Late (more than 5 minutes after the start of lab) prelabs will result in a loss of the points allotted to them. The point of a pre-lab assignment is to ensure that each student who enters the lab is prepared for the day's procedure. An unprepared student is a poor lab partner as well as a safety hazard. **If the Pre-Lab is not turned in, I may refuse to allow your participation in the day's experiment.**

Communication

I use Blackboard only for communicating your grades to you. Beyond that, all online content is available on my course webpage (see info on first page). I also use Remind, which is a smart phone app that allows me to message you important information without the need for cell phone numbers. You may also use this to contact me directly. It is usually a fast way to catch me, but please be respectful of my time and don't expect me to respond immediately on weekends or late. I will remove the reply functionality if this is abused. **Please communicate with me!!** Not to sound desperate, but I can't help you if I don't know what is going on!

Due Dates

Data sheets and Post-Lab assignments will be due **at the beginning** of the next lab meeting. For your first lab meeting, you should prepare the Pre-Lab assignment for the Measurements Lab. For the second lab meeting, you should be ready to hand in the data sheets from the Measurements Lab and the Pre-Lab portion of the Density Lab.

You will be unable to complete the data sheets and Post-Lab for a procedure that you miss. However, work for the previous lab which was due at the missed meeting will be accepted if it is turned in by the next lecture meeting.

Late to Lab

Because it is a safety hazard to have students miss a significant portion of the pre-lab lecture and still participate in the lab, students who arrive to lab 10 minutes or more after the start of lab will not be allowed to participate in the scheduled lab. I will treat this as an absence. You may turn in your work from the previous week, but you will not be able to turn in the work from the missed lab.

General Classroom Policies

Attendance: Students who regularly miss class are rarely successful. It is the student's responsibility to obtain the information/assignments/handouts covered during an absence. An outline of the course schedule is attached to this syllabus. You should obtain specific notes from missed lectures from a classmate.

Academic Honesty: Cheating and plagiarism are not tolerated! The penalties for cheating will be severe. (See University Policies, below.)

Makeup Policy: There will be no makeup labs or quizzes given, barring an extreme circumstance. Exams will only be made up at my discretion if prior arrangements with me through email or in person as soon as you know you will miss an exam. In most cases, rather than a make-up exam, your grade on your final exam may replace the missed exam score.

Disruptions: Electronic devices should be silenced during class. Texting and other social interactions during class are disrespectful to your classmates and will not be tolerated. Students engaged in these activities will be removed from the lecture, and will not be given credit for a quiz/exam given during that lecture period. After three warnings, a student will be dropped from the course.

"Snow Days" If the university closes due to weather causing us to miss class, plan to make up the exam or assignment the next class meeting after the university reopens. Expect an email from me with more details, if needed.

University Policies

Americans with Disabilities Act	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.
Academic Integrity	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.
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 twelfth week of instruction through the end of finals week by logging in to myUCA and clicking on the Evals button on the top right.
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 campus buildings 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.
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 . *Disclosure of sexual misconduct by a third party who is not a student and/or employee is also required if the misconduct occurs when the third party is a participant in a university-sponsored program, event, or activity.
Other Policies	Students are encouraged to familiarize themselves with all policies included in the Student Handbook, particularly the Sexual Harassment Policy, and all Academic Policies.
