

CHEMISTRY 1450
College Chemistry I
CRN: 18291, 16881
Fall 2016

INSTRUCTOR: Bill Taylor
OFFICE: Laney Annex 125
OFFICE HOURS: TTh 2:30 – 4:00; W 8:00 – 11:00, 1:00 – 3:00
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I. COURSE INFORMATION

CLASSES: Lecture - LAN-MAN 104, TTh, 8:00 – 9:15
Lab - LAN-MAN 206, F: 2:00 – 4:50 (CRN 16881)
LAN-MAN 206, F: 11:00 – 1:50 (CRN 18291)

TEXTS: Lecture - CHEMISTRY: A MOLECULAR APPROACH; Tro, 3rd ed.
Lab - Provided by instructor

DESCRIPTION: General chemistry course for science majors and pre-professional students. This is the first of a two-course sequence emphasizing material necessary for the study of more advanced courses in chemistry. Three hours of lecture and 3 hours of laboratory per week.

PREREQUISITES: ACT mathematics score of at least 21 or corequisite/prerequisite of MATH 1390. It is also recommended that students have taken and passed high school chemistry or have completed CHEM 1301 with a C or better.

OBJECTIVES: Upon completion of this course, the student should have gained an understanding of the following topics:

- Chemical reactions.
- Chemical nomenclature
- Stoichiometry
- Gases
- Thermochemistry
- Quantum theory, atomic structure and periodicity
- Theories of chemical bonding

In addition, students completing this course should have gained:

- The ability to apply the facts, concepts, and models of chemistry appropriately to new situations in chemistry, other sciences, 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 900. The lecture will constitute 83% of your grade, with the lab making up the remaining 17%. The breakdown is as follows:

Hourly exams	400
Quizzes	100
Homework	100
1 laboratory	165
Final Exam	<u>200</u>
TOTAL	965

Final grades will be assigned according to the following percentages and are *non-negotiable*:

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

BLACKBOARD

Some components of this course will be delivered via Blackboard. All students registered for this class are automatically registered in its Blackboard component. Information such as this syllabus, lab/exam schedules, and labs will be provided via this medium. Note that this should not be construed as “distance learning”. The information provided via Blackboard is intended as an instructional enhancement and not a substitute for coming to class.

COMMUNICATION VIA EMAIL

I will communicate assignments and other information from time to time using email. Emails will be sent exclusively via Blackboard email. It is the responsibility of the student to check his/her email regularly regarding class information.

HOMEWORK

Homework will be assigned via the Sapling Learning website which is accessible through BlackBoard. Students must register with Sapling Learning in order use these materials. Instructions for registering can be found at: <http://bit.ly/saplinginstructions>. When registering, you will need to know the key code for your section. Your key code will be the CRN number for your section; either 18291 or 16881. *The key code is NOT the same thing as the access code you will also be asked to provide.*

The Sapling Learning system is not included in the price of your textbook, therefore you will need to purchase the service separately. Sapling access codes can be purchased at the bookstore along with your text, or you can purchase access when you register for the service. *Note that these access codes are NOT the same as the key code referred to above.* If you purchased a Sapling access code from the bookstore, select the “prepaid access card” radio button. If you did not purchase an access code from the bookstore, then select a payment option and follow the remaining instructions.

Once you have registered and enrolled, you can log in at any time to complete or review your homework assignments. During sign up or throughout the term, if you have any technical problems with the Sapling service, send an email to support@saplinglearning.com explaining the issue. The Sapling Learning support team is always faster and better able to resolve issues than the instructor.

All problem sets will be available throughout the semester; however homework credit will only be given for problem sets which are submitted prior to the due dates. Due dates for individual problem sets will approximately correspond to the respective exam dates for the same material. Homework will constitute approximately 10% of the total grade for the course. Late homework will not be accepted.

WEEKLY QUIZZES

Unless otherwise indicated, there will be a ten-point quiz every Friday at the beginning of class. Each quiz will cover material from the previous two lectures. The exception to this will be weeks when we have an exam.

LABORATORY

The laboratory portion of the course will consist of 12 labs. The lowest lab score will be dropped. Laboratory materials will be provided via BlackBoard. Most of the labs will consist of three parts: (1) a prelab worksheet; (2) a data sheet; (3) a postlab worksheet. All three components of the laboratory *must* be handed in for full credit on the lab. The prelab should be completed 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. **The use of safety goggles is required** anytime equipment or chemicals are in use in the lab. They may be purchased from the bookstore or from the ACS student affiliate (the chemistry club). Students who fail to bring their goggles to lab will be sent home. Any student observed without eye protection 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.

II. 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 or two (2) labs (these need not be consecutive) without notifying the instructor or officially dropping the course, an automatic "F" or "WF" 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 or a lab 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 lecture in excess of five minutes will be counted absent for the day. Any student arriving more than ten minutes late for a lab will receive no credit for that lab exercise.

GRADING DISPUTES

Suspected errors in grading must be brought to the attention of the instructor within 24 hours of the time when the assignment or exam is handed back. Grading disputes initiated beyond this 24 hour period may not be considered by the instructor. The final decision on disputes brought within the 24 hour period falls entirely within the discretion of the instructor.

CELLPHONES

Cellphones must be put away and silent during class and lab. **Cellphone usage of any type during class or lab is not allowed.** This is a discourtesy to your fellow classmates and to me. Cellphones *may not* be used as calculators at

any time, i.e.; class, lab, or exams. If you must leave the room during an exam (bathroom, allergy attack, etc.), you will be required to leave your cellphone with me while you are out of the room.

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.

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.*

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 450-3613.

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 myUCA and clicking on the Evals button on the top right.

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.

III. LECTURE/LAB SCHEDULE, FALL 2016

Week	Lab	Target Exam Week
8/15 – 8/19	Safety/Orientation	
8/22 – 8/26	Measurements	
8/29 – 9/2	NO LAB	
9/5 – 9/9	Density of Materials	Exam 1: Chapters 1-3
9/12 – 9/16	Separation Techniques	
9/19 – 9/23	Hydrates	
9/26 – 9/30	Stoichiometry	
10/3 – 10/7	Reactions	Exam 2: Chapters 4-5
10/10 – 10/14	Acid/Base Titrations	
10/17 – 10/21	Gas Laws	
10/24 – 10/28	Thermodynamics	
10/31 – 11/4	Spectroscopy	Exam 3: Chapters 6-7
11/7 – 11/11	<i>In-Lab Lecture/Consolidation</i>	
11/14 – 11/18	Covalent Bonding I (Lewis Structures)	
11/21 – 11/25	<i>NO LAB - Thanksgiving Break</i>	
11/28 – 12/2	Covalent Bonding II (VSEPR)	Exam 4: Chapters 8-10
12/5 – 12/9		Final Exam 12/8; 8:00 – 10:00; Comprehensive