

Approved Lab safety goggles

Course Strategy

Learning chemistry requires the development of certain thinking skills that are unique to chemistry and the other physical sciences. Studying and learning chemistry can be difficult, especially at first. The suggestions below should help you spend your study time wisely. Generally, you should set aside 2-3 hours of study time per hour of class time (lecture period). This does not include the extra study time that will be required around exam time.

The best way to study for this course is described below:

- 1) Before lecture, read chapter summaries and topics to be covered.
- 2) Attend class lectures. Some of the information included in my lectures will not be found in your text. While attending class is your choice, you will be held responsible for material presented in class, regardless of whether it is included in your text book or not. More so than possibly any other subject, students who do not attend class are unlikely to succeed in this course.
- 3) After lecture, read the text in detail and review lecture notes. Both will re-emphasize the material, helping to clarify it in your mind. Emphasize areas that were unclear to you after lecture.
- 4) **PRACTICE, PRACTICE, PRACTICE!!** Working examples in the text and problems at the end of the chapter are extremely important tools for transforming concepts into concrete knowledge. This is possibly the most important transition that must occur to succeed in this course.
- 5) Ask questions and get help! If you are confused about a topic or have questions PLEASE ASK for help or clarification!! If you have a question during lecture, please ask it. If you get lost at one point in the lecture it is unlikely that the remaining part of the lecture will make any sense. Don't be embarrassed – if you have questions it means you are paying attention. I am also available to answer questions during my office hours.

Class Disruptions / Cell Phones / PDA's / Calculators

Students are expected to be engaged and attentive during lecture and to act respectfully toward the instructor(s) and their peers throughout the duration of the class, including all lectures, lab and review sessions. Students who act in a disrespectful or disruptive manner (talking during lecture, sleeping in class, intolerance for other students' questions, etc.) will be required to leave the class and will not be allowed to make up any assignments or exams missed because of the dismissal. If the behavior continues, the student will be dropped from the class by the instructor and assigned the appropriate grade.

Cell phones and PDA's are not allowed in the student's possession during exams and/or quizzes. Any student wishing to bring one of these devices to class during testing are required to leave the device on the desk at the front of the classroom at their own risk. The student is solely responsible for the safety of their devices if they choose to bring them into the classroom during exam times. Calculators are allowed only during those quizzes/exams requiring them. Calculators may be allowed during some quizzes but not during exams. This is solely at the instructor's discretion.

Possession of cell phones / PDA's is permitted during regular lectures, labs and reviews, however these devices should be silenced prior to class to minimize the potential disruption of the lecture or other class activities.

Potential Assignments (some or all may be assigned) and Group Work

Group Work

Some assignments in this course may require group work. Students will be required to make the necessary arrangements with the members of their groups to schedule sufficient meeting times to ensure their own active participation in the group project. It is completely at the instructor's discretion to decide what constitutes "adequate participation". Students who do not participate adequately may receive a substantially lower grade than the group project grade or may even not receive any credit for the project depending on their level of participation. Again, it is solely the discretion of the instructor what constitutes sufficient participation and what grade individual group members will receive.

Assignments:

Some or all of these projects may be assigned during the semester. There may also be additional assignments given that are not described below. The following are meant as a representative sample of potential projects rather than an exhaustive list written in stone. All project topics will be assigned on a first-come-first-served basis at the discretion of the instructor and must be approved.

? *Have It Your Way Project*: This project emphasizes the ubiquitous nature of chemistry and the way it relates to each of our unique interests and personalities. Students will develop projects throughout the semester that focus on chemistry topics or aspects that are related to their major in some way. Creativity will be encouraged and expected.

? *You Cant Get Something for Nothing: The Cost of Scientific Advancement*: Nothing is ever free... including the scientific advancements that we enjoy every minute of each day. This project involves students discovering this truth and presenting some form of example of a scientific advance that had or has a price. Students will critically consider the cost of the advancement and evaluate whether the "advancement" was worth the price.

? *Mother's Little Helper: How Prescription Drugs Work*: Students will find an advertisement of a prescription drug and they will analyze the structure of the drug and discuss the mechanism of action of the drug as well as the chemistry behind the disorder that the drug treats. Marketing strategies and cost considerations will also be included.

? *White Rabbits and Purple Haze: Mind-Altering Drugs in Music*: Students will be assigned a song or a personality from popular culture (probably the classic rock era given the musical tastes of your instructor) that is related in some way to mind-altering drugs, both legal (i.e. alcohol, benzodiazepines) and illegal (i.e. hallucinogens, marijuana, opiates, etc). The project will involve a critical analysis of the song and its lyrics with respect to the drug as well as the performers /

song writers involved. The student will then explain the chemistry of drug use, addiction, withdrawal and overdose behind a specific example of their drug class.

? *The Rest of the Story...*: Students will provide additional information concerning the case studies used in class from the text book or will work forensic-based case studies provided.

? *Forensic Fact and Fantasy in Television*: Students will analyze an episode from a forensic-based show (CSI, NCIS, etc) and report on the various aspects relevant to chemistry, like the use of the scientific method and specific techniques.

Class Attendance

Class attendance is strongly recommended. Those students who attend class regularly are the most likely to succeed in this course. Also, quizzes will be given regularly and if you don't attend class you will likely miss one or more quizzes. As mentioned above, a significant part of the material presented in this course will not be in the text book. So attending class is necessary to obtain all the information that you will be held responsible for on the tests.

Make-up Policy

Make-up exams will be given **only** at my discretion. If you must miss an exam for an unavoidable, significant and validated reason, contact me by email or phone (leave a message) **BEFORE** the time of the scheduled exam.

No make-up quizzes will be given.

Any student who is absent from class for two consecutive weeks or misses more than nine classes during the semester may be dropped from the course with a WF.

Academic Dishonesty

The penalties for cheating (ie. representing someone else's work as your own) are SEVERE!! Penalties include, but are not limited to, assigning an "F" for the work and/or the course to expulsion from the University.

Grading

The following is a **tentative** description of the exams/quizzes/laboratory reports included in this class. Specific numbers may be changed if deemed necessary. Four Exams will be given in addition to a number of quizzes both **announced and unannounced (in lab and in class)**. Quizzes are intended to motivate you to keep up to date on your studies. Homework **may** also be assigned and collected if I deem necessary. Whether homework will be graded or not is also left to my discretion. Final exam will be comprehensive.

Exam grades **will not be curved** in the traditional sense of the word. A curve involves adding points to exam grades to raise the class average to a "C". Therefore, the average grade on an exam in this course will not necessarily be a C. However I do reserve the right to adjust exam scores when I deem necessary.

Exams (4)	4 exams @ 100pts	400 points
Assignments (some combination chosen from above description)		200 – 300 points
Quizzes and Misc (extra assignments, class particip, pop quizzes)		0 to 100 points
Final Exam (comprehensive)		200 points
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Total		800 – 1000 points

Laboratory (11, drop lowest one) 10 labs @ 10pts **100 points**
 Will count as 10% of grade.

Overall Average (course grade) = 0.90(Lecture Average) + 0.10(Lab average)

Tentative Scale (subject to change):

- A = 90% +**
- B = 80 – 89%**
- C = 68 – 79%**
- D = 60 – 67%**
- F = < 60%**

Important Dates

- Jan 15, last day to register or add a class**
- Mar 5, mid-term grades due to registrar**
- Apr 4, last day to drop with a “W”**
- Apr 18, last day to drop with “WP”**
- Wednesday, Apr 30th, FINAL EXAM (2 – 4 pm)**

Drop policy

The last day to drop with a “W” is April 4th. If a student drops on or before this date, a “W” is assigned regardless of the student’s grade in the course. Students may officially drop the course until Apr 18th, *however, the grade assigned after April 4th will depend on the student’s grade status in the course at the time of the withdraw.* For example, if the student withdraws from the course on April 5th and at that time has earned a “C” or better in the course up to that point, a grade of “WP” will be assigned. If, however, the student’s grade is below a “C” at the time of withdraw (after April 4th but on or before April 18th) then a grade of “WF” will be assigned at the discretion of the instructor. Again, the grade assigned at this point is at the sole discretion of the instructor. *This designation is punitive and will negatively affect your grade point average!*

Students not attending class for whatever reason for more than four class periods may be dropped from the course by the instructor, at the instructor’s discretion.

Disability Disclosure

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.

Student Handbook Policies

You should familiarize yourself with the policies listed in the 2007-2008 UCA student handbook, especially those related to academics (p. 37-41) and the sexual harassment policy (p. 114-118).

Laboratory

Lab goggles are required for all students and may be purchased in the bookstore. A student will be dismissed from lab and assigned a zero for the report if caught without eye protection more than once during a lab period. While in lab, pay attention, use common sense and exercise caution. Some of the experiments involve techniques that can be dangerous if proper procedures are not followed.

The pre-lab portion of each assigned lab must be completed prior to the date the experiment will be performed. I may periodically check for completed pre-labs at the beginning of the lab period. If a student has not completed the pre-lab portion of the lab report, points will be deducted from the final lab grade. Unannounced lab quizzes may also be given if I deem necessary.

Some labs may be cancelled and replaced with mandatory exam review sessions. These review sessions will involve working problems in groups.

During the semester, one or more laboratory periods may meet off campus. Students will be required to arrange their own travel to and from these off-campus sites.

Tentative Class and Lab Schedule

all dates and content are subject to change!

M 10:00-11:50pm (Laney 206)

<u>Week</u>		<u>Lab</u>
Jan 10-11	Introduction	No Lab
Jan 14-19	Ch 1 & 2 Evidence Collection/Preservation	Exp 1 Measurements
Jan 23-26	Ch 3 Atomic Clues	No Lab (MLK)
Jan 28-Feb 1	Ch 4 Chem Evid / Ch 9 Arson / Ch 13 Poisons	EXAM 1 Review
Feb 4-8	Ch 4 Chem Evid / Ch 9 Arson / Ch 13 Poisons	Exp 2 TLC
Feb 11-15	Ch 9 Arson / Ch 10 Explosions	Exp 3 Blood Alc
Feb 18-22	Ch 5 & 6 Solns	EXAM 2 Review
Feb 25-29	Ch 5 & 6 Solns II	Exp 4 Blood ID
Mar 3-7	Ch 7 Drugs / Ch 8 Addiction	TBA
Mar 10-14	Ch 7 Drugs / Ch 8 Addiction	Exp 5 Fingerprints
Mar 17-21	Ch 7 Drugs / Ch 8 Addiction	EXAM 3 Review
Mar 24-28	Spring Break	
Mar 30-Apr 4	Ch 7 Drugs / Ch 8 Addiction / Ch 13 Poisons	Exp 6 Bloodstains
Apr 7-11	Ch 9 Arson / Ch 11 Time of Death / Ch 13 Poisons	Exp 7 Sunscreen
Apr 14-18	Ch 12 Dirty Bombs and Terrorism	EXAM 4 Review
Apr 21-25	TBA	TBA

***** Final Exam: 2 – 4 pm, Wednesday, April 30th, 2008 *****