Chemistry 1451
College Chemistry II
Spring 2019

Instructor: Dr. Faith Yarberry
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Phone: 501-852-2530
Email: fyarberry@uca.edu
Office Hours: MW 11:00 am – Noon
Study Session: F 1:00-3:00 pm in Laney-Manion 105

Course Information:
Lecture: Laney-Manion 102 – MWF 9:00-9:50 (except 1/21, 1/25, 2/1, 4/1, 4/3)
Text: *Chemistry A Molecular Approach* (4th Ed.) by Tro

Lab: Laney-Manion 206 T – 8:00-10:40 CRN: 27568 (Aaron Gaul – TA)
Laney-Manion 206 T – 10:50-1:30 CRN: 26742 (Samantha Hodges – TA)
Laney-Manion 206 T – 2:40-5:20 CRN: 28255 (Dr Hart – Instructor, Mckenzie Morphew – TA)

Text: Labs to be printed from Blackboard

Course Item	# Given	# Dropped	# Toward Grade	Points per Item	Total Points
Lab	12	2	10	25	250
In-Class Quizzes	?	?	20	5	100
ACS Exam	1	0	1	50	50
Exams	4	1	3	135	405
Final Exam	1	0	1	195	195
Total					**1000**

Grades: A: 900 - 1000 points B: 800-890 C: 700-790 D: 600-690 F: < 600

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.

I do not offer make-up times for any course material. Missed laboratories, quizzes, and exams will be dropped up to the allotted number described above. I do not accept late assignments. Do NOT ask to reschedule the final exam it WILL NOT happen. In the case of illness, please talk to me as soon as possible for any consideration to be given.

Any grade disputes must be discussed within 2 business days with the instructor.

Course Description

College Chemistry II is a required course for chemistry, biology, chemical physics majors, and medical pre-professional tracks. More advanced principles of general chemistry are treated with emphasis on theoretical and quantitative applications.

Prerequisites

The prerequisite for this course is a C or better in CHEM 1450 (College Chemistry I)

Materials Required

Graphing Calculator
Goggles
Textbook
Printed Laboratories (On Blackboard)
Signed Safety Agreement

Course Objectives

Upon completion of this course, the student should have gained:

- An understanding of intermolecular forces, their impact on a substances physical properties, and their impact in solution formation
- The ability to perform calculations using a variety of concentration units
- An understanding of colligative properties and calculations involving colligative properties
- An understanding of rate laws, the ability to determine rate laws, and the ability to perform calculations involving integrated rate laws
- A working knowledge of equilibrium and LeChatlier's principle
- The ability to calculate the pH of solutions containing strong acids, weak acids, strong bases, weak bases, and buffers
- An understanding of the solubility constant and the ability to perform calculations containing the solubility constant
- The ability to determine whether a reaction occurs in the manner described and perform calculations to confirm that understanding
- The ability to work with Redox reactions as part of electrochemistry
- A basic understanding of radioactivity and nuclear reactions

Attendance

Each class meeting is important to the course development. Class begins at 9:00 am and ends at 9:50 am. Roll will be taken. 6 unexcused absences may result in the instructor dropping you from the course with a W at their discretion through the W deadline. After that, the student will receive the grade earned. It is the responsibility of the student to obtain any information covered during their absence.

Attendance in the laboratory is mandatory. More the two absences WILL result in the instructor dropping you from the course with a W prior to the W deadline. After that, the student will receive the grade earned.

Homework

A list of Homework problems can be found on Blackboard for each chapter. These problems <u>will not</u> be graded; however, your success on timed exams will improve by completion of these homework problems.

In-class Quiz

Quizzes will be administered throughout the semester on Blackboard and EdPuzzle. The quizzes can be accessed through the Quiz folder on Blackboard. The quiz will cover material discussed in the previous lecture.

Exams

4-50 min exams will be administered on the dates listed in the syllabus beginning at 9:00 am. The final exam will be held May 1st from 2:00-4:00 pm. Plan your schedule accordingly because make-up exams will NOT be offered. Missed exams will be dropped up to the allotted number.

General Information:

Office Hours

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

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.

The penalty for academic dishonesty on an exam is this course is that the student will receive a zero for that exam and the exam grade will be counted into their final average

Emergency Procedures Summary

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.

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

Information concerning University Academic Policies (such as the Sexual Harassment Policy and Academic Policies) can be found in the Student Handbook. Students should familiarize themselves with all policies listed in the Student Handbook at http://uca.edu/ubulletin2015/general-policies-information .

Laboratory

Laboratory Grade - Laboratory experiments will constitute 250 points of your grade. Each lab will be graded out of 25 points. (Lab Lectures count as a single lab grade of 25 points)

Laboratory Grade	Points	When Due
Pre-Lab	5	Turned in at the start of Lab
Quiz	5	2 points will be associated with the Laboratory EdPuzzle Quizzes (these will be found in the laboratory folder on Blackboard) and must be completed prior to entering the lab. 3 points will be associated with a quiz given at the start of lab.
Data / Results	5	Friday following the lab
Post-Laboratory	5	Friday following the lab
Participation and Safety	5	Throughout lab the First safety violation receives a warning, the second safety violation you will lose 2 points. A third violation and you will be told to leave the lab. Each student is expected to participate in a lab role. Failure to do so will constitute a loss of up to 3 points as determined by the instructor and TA.
Total	**20**	

Laboratory Role

Chemistry is an experimental science. Lab time is your chance to master some of the experimental aspects of the subject. You will work in groups of 2-3 in the lab, but you will still be expected to actively participate in the experiments. Passive observation in lab while your partners do the work is unacceptable and will cost you up to 2 points. The TA and your instructor will determine participation points.

Your participation will be graded on the efficiency by which you carried out your role, whether you participated in completing the experiment and whether you helped in the completion of the calculations on the data/results sheet.

Data/Results

Your data must be recorded to the **correct number of significant digits**. Your results will be graded for correctness in calculations, the correct number of significant digits, and for accuracy.

Post Lab

Your post-laboratory will be graded for thoughtful answers based on your data/results and for correctness. One data and results sheet will be turned in for each group on the Friday after completion of the lab.

Safety

Safety is Mandatory. You will not be allowed to enter the lab without closed toe shoes and goggles. You will be warned upon your first safety violation. A second violation will result in the loss of 2 points. The third violation will result in you being required to leave the lab for that day and receiving a zero for that lab.

Safety Agreement

Before being permitted into the first lab, you must complete the safety agreement
CRN 25768 – Tuesday 8:00 - https://uca.edu/web/forms/view.php?id=353
CRN 25768 – Tuesday 10:50 - https://uca.edu/web/forms/view.php?id=353
CRN 19996 – Tuesday 2:40 - https://uca.edu/web/forms/view.php?id=1382

Technology Instructions

Laboratory Safety Agreement – required for admittance to first lab

CRN 25768 – Tuesday 8:00 - https://uca.edu/web/forms/view.php?id=353
CRN 25768 – Tuesday 10:50 - https://uca.edu/web/forms/view.php?id=353
CRN 19996 – Tuesday 2:40 - https://uca.edu/web/forms/view.php?id=1382

Blackboard – contains PowerPoints, Videos, Optional Homework, Syllabus, etc.

Log into your MyUCA account
Click on the My Courses tab
Click on College Chemistry II

EdPuzzle

http://www.EdPuzzle.com
Click on I'm a new Student and Complete the Form
User Name (make sure you remember it as I will not have access to this information)
Password ((make sure you remember it as I will not have access to this information)
Click Sign Up
Click Join Class
Type: ulewhit
Search
Join

*If you are already a user, skip to the code ulewhit

Tentative Schedule (Lab and Exam Dates will NOT Change)

Date	Topic	Lab Due
Jan 11	Syllabus	
14	Liquids, Solids, and Intermolecular Forces	
15	**Graphing Lab**	
16	Liquids, Solids, and Intermolecular Forces	
16	*Last Day to Change Your Schedule for the Spring Semester*	
18	Liquids, Solids, and Intermolecular Forces	Graphing
21	*Martin Luther King Day – No Class*	
22	**Lab Lecture**	
23	Solutions	
25	*No Class*	
28	Solutions	
29	**Aspirin**	
30	Solutions	
Feb 1	**Exam 1**	Aspirin
4	Solutions	
5	**Sugar Density**	
6	Solutions	
8	Solutions	Sugar Density
11	Chemical Kinetics	
12	**Kinetics**	
13	Chemical Kinetics	
15	Chemical Kinetics	Kinetics
18	Chemical Equilibrium	
19	**K_{eq} Spectral Determination**	
20	Chemical Equilibrium	
22	Chemical Equilibrium	K_{eq}
25	Chemical Equilibruim	
26	**Le Chatelier's**	
27	Acids and Bases	
Mar 1	**Exam 2**	LeChatlier's
4	Acids and Bases	
5	**Weak Acid**	
6	Acids and Bases	
8	Acids and Bases	Weak Acid
11	Aqueous Ionic Equilibrium	
12	**Buffer**	
13	Aqueous Ionic Equilibrium	
15	Aqueous Ionic Equilibrium	Buffer
18-22	*Spring Break – No Classes or Lab*	
25	Aqueous Ionic Equilibrium	
26	**Ksp**	
27	Aqueous Ionic Equilibrium	
29	Free Energy and Thermodynamics	Ksp
29	*Final Date to withdraw with a W grade*	
Apr 1	No Class - Study	
2	*No Lab*	
3	**Exam 3**	

5	Free Energy and Thermodynamics	
8	Free Energy and Thermodynamics	
9	**KNO_3 and Thermodynamics**	
10	Free Energy and Thermodynamics	
12	Free Energy and Thermodynamics	Thermo
15	Electrochemistry	
16	**Electrochemistry Lab**	
17	Electrochemistry	
19	Electrochemistry	Electrochem
22	**Exam 4**	
23	**ACS Exam**	
24	Nuclear	
26	*Study Day – No Class*	
May 1	**Final Exam: 2:00 pm – 4:00 pm**	

Opportunities for Bonus Points (You can earn up to 25 point maximum.)

Opportunity	Attendance
Chalk Talk	5
Science Wednesday's	5
Seminar	5

Attendance Points – Sign in with Dr. Yarberry and be attentive. No cell phones, computers, doing homework or talking.

Lab	
Graphing	_____/25
Lecture	_____/25
Aspirin	_____/25
Sugar	_____/25
Kinetics	_____/25
Keq	_____/25
LeChatlier's	_____/25
Weak Acid	_____/25
Buffer	_____/25
Ksp	_____/25
Thermo	_____/25
Electochem	_____/25

Exams	
Exam 1	_____/135
Exam 2	_____/135
Exam 3	_____/135
Exam 4	_____/135

ACS Exam	
ACS Exam	_____/50

Bonus	
	_____/5
	_____/5
	_____/5
	_____/5
	_____/5

Quiz	
Quiz 1	_____/5
Quiz 2	_____/5
Quiz 3	_____/5
Quiz 4	_____/5
Quiz 5	_____/5
Quiz 6	_____/5
Quiz 7	_____/5
Quiz 8	_____/5
Quiz 9	_____/5
Quiz 10	_____/5
Quiz 11	_____/5
Quiz 12	_____/5
Quiz 13	_____/5
Quiz 14	_____/5
Quiz 15	_____/5
Quiz 16	_____/5
Quiz 17	_____/5
Quiz 18	_____/5
Quiz 19	_____/5
Quiz 20	_____/5
Quiz 21	_____/5
Quiz 22	_____/5
Quiz 23	_____/5
Quiz 24	_____/5
Quiz 25	_____/5
Quiz 26	_____/5
Quiz 27	_____/5
Quiz 28	_____/5
Quiz 29	_____/5
Quiz 30	_____/5

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To determine what you need to make on your final exam:

A. Sum of Top 10 Lab Grades _____

B. Sum of Top 3 Exam Grades _____

C. ACS Exam _____

D. Sum of Top 20 In-Class Quiz Grades _____

E. Bonus (up to 25 points) _____

F. Total Sum A – E above **_____**

For an A on your transcript, the following equation indicates the number of points you need on your final exam.

900 – F = _____

For a B on your transcript, the following equation indicates the number of points you need on your final exam.

800 – F = _____

For a C on your transcript, the following equation indicates the number of points you need on your final exam.

700 – F = _____

For a D on your transcript, the following equation indicates the number of points you need on your final exam.

600 – F = _____