

Course Syllabus
CHEM 112

Welcome to CHEM 112. This course syllabus outlines the agreement between instructor and student for the duration of the semester. The schedule is subject to change (i.e. due to inclement weather), but the course policies are NOT. Please note that this content is also available on Desire2Learn and students should refer to the course website often for class updates and announcements.

This course is a continuation of CHEM 111, but is more oriented on problem solving. It is, therefore, not the same course. You will find that a regular study schedule is essential to success in this course; if you do not put in the minimum 16 hours of study each week you can anticipate a low/failing grade. This course has a heavy workload and requires a huge time commitment; plan accordingly. Take advantage of the instructor office hours and the resources that are offered to help you.

Instructor Contact Information

Email: kathryn.allen@millersville.edu

Office: 317 Caputo Hall
Office Phone: 717-871-7419

Office Hours:
M 11 am – 12 pm
T 2-4 pm
Th 2-4 pm

Class times

Lectures

MWF 9 – 9:50 Roddy 149

Recitations

A: M 1-1:50 pm Roddy 153

B: T 8-8:50 am Roddy 153

C: T 5-5:50 pm Roddy 153

Laboratory

A: M 2-3:50 pm Caputo 332

B: T 9-10:50 am Caputo 332

C: T 6-7:50 pm Caputo 332

Important Dates

Jan. 19th – Semester begins

Jan. 26th – last day to drop/add

March 7-13th - Spring recess

April 1st – withdraw period ends

May 2nd – last day of classes

Course Objectives:

- To explain the kinetics of a reaction
- To use le Chatelier's Principle and equilibrium constants to predict the effect of introducing reactants to a new system.
- To define acids and bases, and to identify the kinetics and equilibrium values of various acid-base reactions.
- To predict solubility
- To identify the entropy and free energy of simple systems
- To identify the basic components of a galvanic cell and explain and apply a redox reaction to a battery.
- To define a nuclear reaction and identify the various types of radioactivity
- To identify the representative elements and their properties
- To identify the organic functional groups and their basic properties

Required Course Materials

- Lecture Text (required):** *Chemistry*, 9th ed., ZUMDAHL and ZUMDAHL, Brookes/Cole, 2014, ISBN 9781133611097. Alternative e-book: available to rent on Kindle for \$89.61.
- A **calculator** that has log, ln, 10^x , and e^x functions. Cell phone calculators are strictly forbidden when taking quizzes and exams.
- Electronic Materials:
 - Plickers card, provided by instructor, required every recitation
 - D2L access
 - Millersville email account access – you will be contacted via your Millersville email account regarding class schedule and assignment changes. Please stay up to date by checking this account regularly.
 - EdPuzzle account: Free, accessible by following these instructions:
 - <https://edpuzzle.com/>
 - click on “I’m a new student”
 - Fill in Your First Name, Username (use format LastNameFirstInitialAnyNumbers), Password and select ‘Continue’.
 - Click on ‘Join Class’ and type: b4W422
 - When you select ‘Join’ you will be taken to the class page.

Tentative Lecture Schedule

Content to be Covered	Topics
12	Chemical Kinetics
13	Chemical Equilibrium
Exam 1	
14	Acids and Bases
15	Acid-Base Equilibria
16	Solubility and Complex Ion Equilibria
Exam 2	
17	Thermodynamics (Spontaneity, Entropy and Free Energy)
18	Electrochemistry
19	Nuclear Reactions
Exam 3	
20	The Representative Elements
21	Organic and Biological Molecules (time permitting)
Comprehensive Final Exam (CHEM 111 and CHEM 112 material) TBA	

Grading

Three Mid-Term Exams	30%
Final Exam	20%
Plickers in Rec.	10%
EdPuzzle Hwk	20%
Laboratory	20%
Total Class %	100%

General Course Policies

• **Assignment Policies:**

- **Exams:** All students must take examinations as scheduled. Other than health problems (**that require a written, signed excuse from a doctor**), excused absences will only be considered if the excuse is submitted **before** the scheduled exam. A make-up exam will be scheduled at a mutually agreed upon time within **two** days of the scheduled exam. It is the student's responsibility to schedule the make-up within the time-frame; otherwise it will result in a grade of zero.
 - **Quizzes:** There will be lecture quizzes given every week during recitation. These cannot be made up, regardless of the excuse. You may drop the lowest two quiz grades. These are administered via Plickers cards. You are responsible for remembering your Plicker card. Forgetting your Plicker card does not allow you to make up a quiz.
 - **Homeworks:** Your homeworks are due **before class**, as posted. There is no make-up for a missed homework. All homeworks are EdPuzzle assignments, meant to be completed before the class in which we discuss the topic. You are responsible for checking for assignments that are due. You can find these on EdPuzzle.com. Credit will be given per week basis. The lowest two weeks of the semester will be dropped from your grade. In the event that a week is skipped or a homework is not assigned, the instructor will weight another week heavier, based on the importance of the topic. The skipped week/homework that is not assigned will not count toward your drop.
- **Extra-credit:** There is no extra credit offered in this course, however, if the class average is below 65% on a mid-term exam, the instructor will offer a regrade option in which the student has one class period after receiving their exam back to fix any errors and return it to the instructor.
 - No partial credit will be given on the regrade, but $\frac{1}{2}$ of the corrected answers will be credited to the current grade.
 - The corrected answers must be answered in totality, even if they are multiple choice. This means that all work must be shown to receive **any** credit back. A written explanation is necessary if no math is involved.
 - The original test must be handed back with the regrade.
 - The regrade must be written on a separate sheet of paper from the original exam.
 - **Safe and Productive Environment:** Millersville University and its faculty are committed to assuring a safe and productive educational environment for all students. In order to meet this commitment and to comply with Title IX of the Education Amendments of 1972 and guidance from the Office for Civil Rights, the University requires faculty members to report incidents of sexual violence shared by students to the University's Title IX Coordinator. The only exceptions to the faculty member's reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a University-approved research project.
 - **Academic Honesty:** If you break the academic honesty policy of Millersville University, there are severe penalties. To define:
 - Cheating occurs when a student intentionally uses or attempts to use unauthorized materials, information or study aids in any academic exercise.
 - Falsification occurs when a student intentionally fabricates/invents information/citations in any academic exercise.
 - Plagiarism occurs when a student intentionally and knowingly represents the words or ideas of another as his or her own in any academic exercise.
 - Facilitating academic dishonesty occurs when a student intentionally and knowingly helps or attempts to help another commit an act of academic dishonesty.
The penalties are as follows:
 - If you plagiarize/falsify your lab work, you will receive a zero for that lab work. If you receive a zero for TWO or MORE laboratory reports, you will fail the laboratory portion of the course. If you fail the lab portion of the course, you fail the course in its entirety.
 - If you are caught plagiarizing/falsifying homework assignments or D2L posts, I will NOT accept any further homework assignments or D2L posts from you.
 - If you are caught plagiarizing/facilitating academic dishonesty on an exam, you will receive an automatic zero for the ENTIRE exam.
 - **Class attendance is required.** It should be recognized that missing more than one to two days of a chemistry course is most unwise due to the pace of the course and the amount of material covered. It is the student's responsibility to learn the material covered in class.

- **Cell phone use is prohibited in class.** The use of a cell phone during exams results in an immediate zero. Using a cell phone during lecture may result in the cell phone being taken away.
- Any **regrade requests** (lab or lecture) must be **submitted within one week** of receiving the material back from the instructor or the regrade will not be considered.
- The students who meet the eligibility requirements to receive **academic accommodations** through learning services should give the instructor a Testing Accommodation Request form ("green sheet") as soon as possible and should take quiz/exams on the same day and time at the office of learning services.