Chemistry 105 -Fundamental Chemistry
Lecture Section 03/03H
Course Syllabus
Fall 2020

Instructor: Dr. Laura J. Cole
Office: Chemistry Biology Building 412
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Canvas: Chemistry 105

Virtual Office Hours: MWF 11:00 am – 11:50 am, T 10:00 am – 10:50 am on Zoom. These will be scheduled via Microsoft Bookings for 10 minute intervals. If you will need more than 10 minutes, please schedule more than one interval.

https://outlook.office365.com/owa/calendar/DrColesOfficeHours@uwspedu.onmicrosoft.com/bookings/

If none of these scheduled times work for you, please contact me and we can setup an alternate time.

Class Sessions

Lecture:	Sec 03/03H	MWF	11:00	Virtual - Recordings on Canvas	
Discussion:	Sec 03HD1	Tuesday	12:00	Virtual - on Zoom	
	Sec 03D2	Tuesday	11:00	Virtual - on Zoom	
	Sec 03D3	Tuesday	1:00	Virtual - on Zoom	
Laboratory:	Sec 03HL1	Thursday	8:00 - 10:50	CBB 230 – Cohort A/B	Cole
	Sec 03L2	Thursday	11:00 - 1:50	CBB 230 – Cohort A/B	Shulfer
	Sec 03L3	Thursday	2:00 - 4:50	CBB 226 – Cohort A/B	Shulfer

Course Description

Chemistry 105 and 106 are for students who desire one year of college chemistry. Topics covered in Chemistry 105 include: matter, measurements in chemistry, atomic & molecular structure, chemical bonding, stoichiometry, chemical reactions, thermochemistry and gases. Concurrent registration in Math 107 or suitable math placement score is required for this course.

The course format is lecture, discussion and laboratory. For the lecture, recordings of the material presented will be available in short segments on Canvas. In the discussion session, questions related to the material presented will be answered and example problems will be shown on Zoom at your discussion class time. We will work on practice problems in breakout groups on Zoom. Quizzes will also be given during discussion via Canvas quizzes. In the laboratory session, material presented in lecture will be further explored by performing experiments both in person and online. From these three distinct types of classroom interaction, you will become more knowledgeable about fundamental chemistry.

In addition, this course fulfills the natural science portion of the general education program. The learning outcomes for natural science are:

1. Explain major concepts, methods, or theories in the natural sciences to investigate the physical world.
2. Interpret information, solve problems, and make decisions by applying natural science concepts, methods, and quantitative techniques.
3. Describe the relevance of aspects of the natural sciences to their lives and society.

Required Materials

Textbook: Chemistry: Structure and Properties, 2nd Edition, by Nivaldo J. Tro. Pearson Education, Inc., 2018. The textbook is available at text rental.

Laboratory Experiments: Chem. 105 LabFlow. This is available for purchase from www.labflow.com or from the bookstore.

Laboratory Goggles: These must be goggles, not glasses. If you are doing lab online only, you do not need goggles. Goggles may be purchased from the bookstore or nicer ones may be purchased from the Chemistry Club at the start of the semester.

Calculator: A **non-programmable** scientific calculator that will perform the functions log x, 10^x, ln x, and e^x.

Policies & Procedures

Face Coverings: At all UW-Stevens Point campus locations, the wearing of face coverings is mandatory in all buildings, including classrooms, laboratories, studios, and other instructional spaces. Any student with a condition that impacts their use of a face covering should contact the Disability and Assistive Technology Center to discuss accommodations in classes. Please note that unless everyone is wearing a face covering, in-person classes cannot take place. This is university policy and not up to the discretion of individual instructors. Failure to adhere to this requirement could result in formal withdrawal from the course.

Other Guidance for in person class:

- Please monitor your own health each day using this screening tool. If you are not feeling well or believe you have been exposed to COVID-19, do not come to class; email your instructor and contact Student Health Service (715-346-4646).
    - As with any type of absence, students are expected to communicate their need to be absent and complete the course requirements as outlined in the syllabus.
- Maintain a minimum of 6 feet of physical distance from others whenever possible.
- Do not congregate in groups before or after class; stagger your arrival and departure from the classroom, lab, or meeting room.
- Wash your hands or use appropriate hand sanitizer regularly and avoid touching your face.
- Please maintain these same healthy practices outside the classroom.

Attendance: Attendance is expected for discussion (Zoom) and laboratory (Cohort). Cohort A and B will be assigned by me before the first class meeting. You are expected to watch all of the lecture recordings in order as our material builds from the previous material.

Laboratory: You cannot receive a grade higher than a C in this course without earning at least 50% of the possible points in the laboratory. LabFlow experiments are both for the virtual labs and the online labs. There are prelab videos for you to watch as well as a quiz to take related to those videos. The lab quiz will be scaled to 20% of the total lab score and the lab report will be scaled to 80% of the total lab score. Late laboratory reports will be worth 5 pts if less than one week late and will receive no credit if more than one week late.

Examinations: There will be three exams worth 100 pts each given during the semester, plus a final exam. The hour exams test material covered since the last exam. The final exam is cumulative. All exams except the final will be given during a time period for 1 hour that will be from Canvas quizzes. The dates of the exams are given in the lecture schedule and on Canvas. No make-up exams will be given unless prior approval has been given. The final exam will be given during a time period for 2 hours that will be from Canvas quizzes. If your final exam percentage is higher than one of your regular exams, it will replace the score.

Quizzes: Four quizzes worth 40 pts each will be given throughout the semester. Quizzes will be available to be taken during the scheduled discussion times via Canvas. No make-up quizzes will be given. Your best quiz score will replace your worst quiz score. The quizzes will cover lecture material, assigned reading and problems from the end of the text chapters.

Homework: There will be seven problem sets assigned throughout the semester, each one worth 10 pts.

Assignments: There will be at least three assignments worth a total of 60 pts throughout the semester. These assignments are designed to have you thinking about chemistry in the world around you.

Problems: There are problems at the end of each chapter designed to help you understand the material. You should work as many as you feel necessary in order to understand the material. Periodically, handouts will be provided to you with additional problems.

Electronic Resources: A Canvas course site has been set up for our course. You can access it from www.uwsp.edu/canvas and log in with your UWSP log on information. There are resources on this page to help you learn how to use Canvas. Canvas is our learning management system where all of our course information is housed. All lecture recordings, documents, exams and quizzes and announcements are posted on Canvas and may only be used by students currently enrolled in the course.

Grading: The course grade will be determined by the sum of the points received from the following:

Hour Exams (3 at 100 pts each)	300
Quizzes (4 at 40 pts each)	160
Homework (7 at 10 pts each)	70
Assignments	60
Final Exam	200
Laboratory (13 at 10 pts each)	130
Total	920

The grading scale cutoffs will be as follows:

A ≥ 93% - 855 pts
B: 83% - 763 pts
C: 73% - 671 pts
D: 63% - 579 pts
F < 63% - 579 pts.

Please note that at least 65 points must be earned in the laboratory for a C grade in the course, regardless of the total points received. Grades near a cutoff may be assigned + or - designations.

Academic Responsibility: Academic misconduct will not be tolerated. Academic misconduct is defined by the UWSP Handbook Chapter 14.03(1). Anyone who engages in academic misconduct will be subject to disciplinary measures according to the UWSP handbook. The handbook chapter can be found using the following web link: http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf.

Disability Services: Students with disabilities should contact the Office of Disability Services during the first two weeks of the semester if you wish to request accommodation.

Religious Beliefs: Religious beliefs will be accommodated according to UWS 22.03 as long as you notify me within the first three weeks of the beginning of classes of the specific days which you will request relief from an examination or academic requirement.

A Few Notes

I am looking forward to teaching and learning with you in Chemistry 105 in all of the different modes! I am providing my schedule for you in case you would like to setup a time to meet that is different than my office hours. I am available to meet with students during my class preparation time depending on the day. In order to help you learn chemistry, I welcome comments from you throughout the semester. You can contact me by phone, email or via Zoom. Good luck with the semester!

Professor Laura J. Cole Fall Semester 2020

	Monday	Tuesday	Wednesday	Thursday	Friday
08:00				105 Lab 3HL1 CBB 230	
09:00	Class Preparation	Class Preparation	Class Preparation		Class Preparation
10:00		Office Hour Zoom			
11:00	Office Hour Zoom	105 Dis 03D2 Zoom	Office Hour Zoom	Class Preparation	Office Hour Zoom
12:00	Class Prep Preparation	105 Dis 3HD1 Zoom	Class Preparation		Class Preparation
1:00		105 Dis 03D3 Zoom			
2:00	248 Lab 01L2 CBB 466	Class Preparation	248 Lab 01L2 CBB 466		Meeting/Seminar
3:00					
4:00					

Chem. 105 Tentative Lecture Schedule
Fall 2020

Week	Topic	Reading	Quizzes and Exams
1	Units, Measurements and Problem Solving	Ch. E	
2	Atoms	Ch. 1	
3	Atoms	Ch. 1	Tuesday, Sept. 15: Quiz 1
4	Atomic Structure	Ch. 2	
5	Atomic Structure	Ch. 2	Friday, Oct. 2: Exam I
6	Periodic Properties	Ch. 3	
7	Molecules and Compounds	Ch. 4	Tuesday, Oct. 13: Quiz 2
8	Chemical Bonding	Ch. 5	
9	Bonding Theories	Ch. 6	Friday, Oct. 30: Exam II
10	Chemical Reactions and Stoichiometry	Ch. 7	
11	Chemical Reactions and Stoichiometry	Ch. 7	Tuesday, Nov. 10: Quiz 3
12	Aqueous Solutions	Ch. 8	
13	Aqueous Solutions	Ch. 8	
14	Thermochemistry	Ch. 9	Wednesday, Dec. 2: Exam III
15	Gases	Ch. 10	Tuesday, Dec. 8: Quiz 4
16	Final Exam		Tuesday, Dec. 15: 10:15 - 12:15

Fall 2020 Chem. 105 Tentative Lab Schedule

Week	Group A (In-Person odd weeks)	Group B (In-Person even weeks)
1 (8/31)	**Virtual Lab #1:** Lab Safety	**Virtual Lab #1:** Lab Safety
2 (9/7)	**Virtual Lab #2:** Chemistry Glassware & Measurement	No Lab
3 (9/14)	**In-Person Lab #1:** Basic Laboratory Techniques	**Virtual Lab #2:** Chemistry Glassware & Measurement
4 (9/21)	**Virtual Lab #3:** Beer's Law & Spectrophotometry	**In-Person Lab #1:** Basic Laboratory Techniques
5 (9/28)	**In-Person Lab #2:** Water Quality in Local Waters	**Virtual Lab #3:** Beer's Law & Spectrophotometry
6 (10/5)	**Virtual Lab #4:** Chemical & Physical Properties	**In-Person Lab #2:** Water Quality in Local Waters
7 (10/12)	**In-Person Lab #3:** Chemistry of Copper & Percent Yield	**Virtual Lab #4:** Chemical & Physical Properties
8 (10/19)	**Virtual Lab #5:** Volumetric Analysis	**In-Person Lab #3:** Chemistry of Copper & Percent Yield
9 (10/26)	**In-Person Lab #4:** Determining the Concentration of an Acid	**Virtual Lab #4:** Volumetric Analysis
10 (11/2)	**Virtual Lab #6**: Chemical Reactions & Equations	**In-Person Lab #4:** Determining the Concentration of an Acid
11 (11/9)	**In-Person Lab #5:** Constant Pressure Calorimetry	**Virtual Lab #5**: Chemical Reactions & Equations
12 (11/16)	No Lab	**In-Person Lab #5:** Constant Pressure Calorimetry
13 (11/23)	Thanksgiving: No Lab	Thanksgiving No Lab
14 (11/30)	**Virtual Lab #7:** Chemical Clue	**Virtual Lab #7:** Chemical Clue
15 (12/7)	**Virtual Lab #8:** Ideal Gas Law	**Virtual Lab #8:** Ideal Gas Law