

Chemistry 105

Course Syllabus

Fall 2017

Instructor: Dr. Laura J. Cole
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D2L: Chemistry 105

Office hours: M – 11:00; T – 10:00, W – 9:00, R – 2:00. Other times by appointment.

Class Sessions

Lecture:	Sec 02	TRF	9:00	SCI	D101	
Discussion:	Sec 02D1	T	12:00	SCI	A111	
	Sec 02D2	T	2:00	SCI	A111	
	Sec 02D3	T	3:00	SCI	A111	
	Sec 02D4	T	4:00	SCI	A111	
Laboratory:	Sec 02L1	R	11:00 - 1:50	SCI	C124	Lueck
	Sec 02L2	F	11:00 - 1:50	SCI	C124	Lueck
	Sec 02L3	M	2:00 - 4:50	SCI	C124	Lueck
	Sec 02L4	W	2:00 - 4:50	SCI	B140	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, intermolecular forces, stoichiometry, chemical reactions, and thermochemistry. Math 90 or placement in Math 100 (being replaced with Math 95 and Math 107) or higher is required for this course.

The course format is lecture, discussion and laboratory. In the discussion session, questions related to the material presented will be answered and example problems will be shown. Quizzes will also be given during discussion. In the laboratory session, material presented in lecture will be further explored by performing experiments. From these three distinct types of classroom interaction, you will become more knowledgeable about fundamental chemistry.

Required Materials

Textbook: Chemistry: An Atoms-Focused Approach, 1st Edition, by T. R. Gilbert, R. V. Kirss, N. Foster, W. W. Norton & Company, 2014. The textbook is available at text rental.

Laboratory Materials: Chem. 105 Laboratory Packet for lecture section 2 that is available at the bookstore.

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

Policies & Procedures

Attendance: Attendance in lecture is your responsibility; however, the material covered in lecture plays an important part in the overall class content. Material missed due to absence is your responsibility. Attendance is expected for discussion and laboratory.

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.** 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 the regularly scheduled lecture time. The dates of the exams are given in the lecture schedule. No make-up exams will be given unless prior approval has been given. 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. 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 D2L course site has been set up for our course. You can access it from www.uwsp.edu/d2l and log in with your UWSP log on information. I will post information related to class, such as worksheets, and a running total for your grades on this site.

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)	<u>130</u>
Total	920

The grading scale cutoffs will be as follows:

- A \geq 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>.

Cell Phone Usage: Cell phones should be turned off and not used during class. You may not use your cell phone as a calculator.

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 a fruitful semester of teaching and learning with you in Chemistry 105. I am providing my schedule for you; if you cannot see me during my normal office hours, please feel free to stop in and arrange a time that fits both of our schedules. In order to perform my job effectively, I welcome comments from you throughout the semester. You can contact me by phone, email or in person. Good luck with the semester!

Professor Laura J. Cole

Fall Semester 2017

	Monday	Tuesday	Wednesday	Thursday	Friday
08:00		Class Prep		Class Prep	Class Prep
09:00	Research, Class Prep	105 Lec 02 D101	Office Hour	105 Lec 02 D101	105 Lec 02 D101
10:00		Office Hour	Research, Class Prep	Research, Class Prep	Research, Class Prep
11:00	Office Hour	Lunch			
12:00	Lunch	105 Dis 02D1 A111	Lunch	Lunch	Lunch
1:00	Class Prep	Class Prep	Class Prep	Class Prep	Class Prep
2:00	248 Lab 01L2 D114	105 Dis 02D2 A111	248 Lab 01L2 D114	Office Hour	Meeting/ Seminar
3:00	248 Lab 01L2 D114	105 Dis 02D3 A111	248 Lab 01L2 D114	Research, Class Prep	
4:00	248 Lab 01L2 D114	105 Dis 02D4 A111	248 Lab 01L2 D114		

**Chem. 105 Tentative Lecture Schedule
Fall 2017**

Week	Topic	Reading	Quizzes and Exams
1	Matter and Energy	Ch. 1	
2	Atoms, Ions and Molecules	Ch. 2	
3	Atoms, Ions and Molecules	Ch. 2	Sept. 19: Quiz 1
4	Atomic Structure	Ch. 3	
5	Atomic Structure	Ch. 3	Oct. 6: Exam I
6	Chemical Bonding	Ch. 4	
7	Chemical Bonding Bonding Theories	Ch. 4 Ch. 5	Oct. 17: Quiz 2
8	Bonding Theories	Ch. 5	
9	Intermolecular Forces	Ch. 6	Nov. 3: Exam II
10	Stoichiometry	Ch. 7	
11	Stoichiometry	Ch. 7	Nov. 14: Quiz 3
12	Aqueous Solutions	Ch. 8	
13	Aqueous Solutions	Ch. 8	Dec. 1: Exam III
14	Thermochemistry	Ch. 9	
15	Thermochemistry	Ch. 9	Dec. 12: Quiz 4
16	Final Exam		Dec. 19: 10:15 - 12:15

Fall 2017 Chem. 105 Lab Schedule

Dates	Experiment
9/5 – 9/8	Safety & Check in
9/11 - 15	Experiment 1: Precision vs. Accuracy in Scientific Measurements and Calculations
9/18 - 22	Experiment 2: Water Content of a Hydrated Salt
9/25 – 9/29	Experiment 3: Introduction to Absorption Spectrophotometry
10/2 – 10/6	Experiment 4: Colorimetric Identification of Iron
10/9 – 10/13	Experiment 5: Periodic Properties
10/16 – 10/20	Experiment 6: Lewis Formulas & Molecular Models
10/23 – 10/27	Experiment 7: Lab Practical
10/30 – 11/3	Experiment 8: Intermolecular Forces
11/6 – 11/10	Experiment 9: Separation of a Mixture
11/13 – 11/17	Experiment 10: Limiting Reactant
11/20 – 11/24	No Labs this week due to Thanksgiving Holiday!
11/27 – 12/1	Experiment 11: Introduction to Titrations: KHP Titration
12/4 – 12/8	Experiment 12: Vinegar – Is the Label Truthful?
12/11 – 12/15	Experiment 13: Measuring Enthalpy Changes and Checkout