

Chem. 105 Syllabus Fundamental Chemistry Fall 2017

Contact Information

Instructor: Dr. Amanda Jonsson
Office Phone: 715-346-2600

Email: ajonsson@uwsp.edu
Office: Science B145

The best way to reach me is through my university email. I check my email regularly during working hours (8 a.m. – 5 p.m.). I do not check my email at night or on weekends.

My Schedule – updated schedule can be found on D2L or outside my office door

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00					
9:00					
10:00	<i>Office Hour</i>	105 Lec 03 CCC 303	106 Dis 03D1 SCI A110	105 Lec 03 CCC 303	105 Lec 03 CCC 303
11:00		105 Lab 03L1 SCI B140	Class Prep	105 Lab 03L2 SCI B140	105 Lab 03L3 SCI B140 Dr. Speetzen
12:00			106 Dis 03D2 SCI A110		
1:00			106 Dis 03D3 SCI A110		
2:00		105 Lab 03L4 SCI B140 Dr. Speetzen	106 Dis 03D4 SCI A110	Class Prep	Seminar / Meeting
3:00			<i>Office Hour</i>	<i>Office Hour</i>	
4:00					

Meeting Times

Lectures: 10 – 10:50 a.m. Tuesday, Thursday, Friday

Room: CCC 303

Lab/Discussion:

Section	Discussion (Room)	Lab (Room)	Lab Instructor (Office)
03D1	W 10 – 10:50 (SCI A110)	T 11 – 1:50 (SCI B140)	Dr. Amanda Jonsson (SCI B145)
03D2	W 12 – 12:50 (SCI A110)	R 11 – 1:50 (SCI B140)	Dr. Amanda Jonsson (SCI B145)
03D3	W 1 – 1:50 (SCI A110)	F 11 – 1:50 (SCI B140)	Dr. Erin Speetzen (SCI B135)
03D4	W 2 – 2:50 (SCI A110)	T 2 – 4:50 (SCI B140)	Dr. Erin Speetzen (SCI B135)

Required Materials

Textbook

Chemistry – An Atoms Focused Approach Gilbert, Kirss, Foster, W.W. Norton & Company, 2014. This book is available for rental at the University Bookstore.

Lab Manual

Chem. 105 Lab Manual – Fall 2017, UW-Stevens Point. This lab manual is available for purchase at the University Bookstore.

Lab Notebook + Online Homework Access Card

An appropriate lab notebook and Sapling Learning online homework access card are available for purchase at the University Bookstore. You need to make sure to purchase a notebook that comes with carbonless self-copy pages, pre-printed page numbers and no perforations on the permanent pages.

Scientific Calculator

Your calculator must be able to do logarithms, exponents and scientific notation. **You will not be allowed to use calculators with an alphabetic keyboard or other electronic devices such as cell phones, tablets, etc. on any exams.**

Optional Materials

3-Ring Binder

In order to better keep track of course materials, some students may find that using a 3-ring binder is beneficial as it allows you to more easily incorporate handouts or figures into your notes.

Course Description

Fundamental principles and theories of chemistry, including stoichiometry, atomic and molecular structure and bonding, nuclear chemistry, thermodynamics, descriptive chemistry of nonmetals and transition metals, chemical kinetics and equilibria, introduction to organic chemistry.

Chemistry Department Learning Outcomes Appropriate for Chem. 105

Students will perform tasks, at an introductory level, representing these learning outcomes.

1. Apply foundational principles of chemistry to explain chemical and physical properties of matter.
2. Work safely in a chemistry laboratory.
3. Use appropriate methods, techniques, and modern instruments for the synthesis, isolation, and characterization of matter and for the analysis of mixtures.
4. Analyze experimental results to draw justifiable conclusions
5. Address chemical problems using accumulated knowledge and skills in combination with scientific methodology to design and conduct experiments.

This Course Meets the Following General Education Learning Outcomes

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.

Preparation/Participation

Before coming to class each day, you should read through the assigned reading (rarely more than 10 pages and often with many pictures/tables). I do not expect that you understand all the material before coming to class, however, I do expect that you are familiar enough with the material that we can discuss it without having to stop to define each new word.

During class I expect that you pay attention, refrain from using technology (tablets, laptops, phones, etc.) in a disruptive way, and participate in class discussions and activities.

Participation is not awarded its own grade, but in my experience students who participate in class tend to do better than those who do not.

Recommended study habits and tips

Chemistry is not an easy subject to master, and you should not expect to master it without hard work. The general rule of thumb is that you should spend 2 – 3 hours of time outside of class for each hour that you are in class. Chem. 105 is a 5-credit class, which means that you should plan on spending *10 – 15 hours a week* preparing for class, working through end-of chapter problems, working on class assignments, and studying for exams. **The best way to break this time up is to spend a little bit of time working on chemistry each day.** Chemistry can become incredibly overwhelming if you wait until the night before an exam to start studying.

Here are some study habits and tips that may be useful.

- Before coming to class each day, quickly (5 – 10 minutes) review your notes from the previous class to remind yourself of what we have already covered.
- When taking notes in class leave a lot of white space so that you can go back and fill in gaps later. After class, sit down with a friend and compare notes. Fill in the things you are missing. When you are done read through your notes and see if they make sense. If not, talk to a friend, re-read sections of the book, or talk to the professor to keep filling in the gaps until things make sense to you.
- Do as many problems as possible! The best way to learn how to answer/solve chemistry problems, or any other skill, is practice, practice, and more practice!
- Studying with friends or with a tutor can help you get started as you learn a new topic. However, **on an exam no one else will be there to get you started on a problem or tell you when you have made a mistake!** You need to spend at least part of your time studying alone, without looking at your notes, so you can be confident walking into an exam that you know how to do these types of problems.

Grading

Your grade in this course will be broken down into two components: a laboratory component and a lecture component. You must receive a passing grade in both the lecture and laboratory components in order to pass the overall course.

Your grade in both the lab component, lecture component, and in the overall course will be determined using the scale shown below. I reserve the right to change the grading policy as needed throughout the semester, but I will not make it harder to receive a grade.

Percent	Grade	Percent	Grade
≥ 93 %	A	73 – 76 %	C
90 – 92 %	A-	70 – 72 %	C-
87 – 89 %	B+	67 – 69 %	D+
83 – 86 %	B	63 – 66 %	D
80 – 82 %	B-	< 63 %	F
77 – 79 %	C+		

******You must receive a passing grade (>63%) in BOTH the laboratory component AND the lecture component to pass this course******

Laboratory Component The lab component grade will be determined based on your performance on lab exercises, a lab practical given during lab and a written lab exam given at the end of the semester.

Lab Exercises – You will be completing 12 laboratory exercises during the semester. **Lab make-ups are not allowed for any reason.** Each lab will be worth 8 points. *Your 10 highest scores will be used in calculating your lab grade.*

Lab Practical – Students will complete an individual lab practical during week 8 of the semester. The lab practical will cover skills that you should have acquired during the first part of the semester. **A make-up lab practical is not allowed for any reason.** The lab practical will be worth approximately 20 points.

Lab Exam – Near the end of the semester, a written lab exam will be given during lecture. This written exam will cover the concepts and skills you should have acquired in the laboratory during the semester. The lab exam will be worth approximately 25 points.

Lecture Component The lecture component grade will be determined based on your performance on online homework assignments, lecture exams and a final exam.

Online Homework – We will be using the Sapling Learning online homework system this semester. Your online homework grade will be scaled out of a total of 60 homework points.

Lecture Exams – There will be a total of 4 exams given during lecture. Lecture exams will last 50 minutes and are all closed note, closed book exams.

Final Exam – At the end of the semester is a cumulative final exam, covering all material from the semester. The final exam will last 2 hours and is also closed note, closed book.

Students who must reschedule an exam should make arrangements before the exam takes place. If an unforeseeable event takes place, students must contact me within 24 hours of the missed exam to reschedule. Make-ups must be taken within 2 business days, regardless of the reason for missing the assignment. Students who fail to meet these timelines will not be allowed a make-up.

Laboratory	Top 10 Lab Reports	each	8 pts	=	80 pts
	Lab Practical				20 pts
	Lab Exam				25 pts
	Lab Total				125 pts
Lecture	Online Homework				60 pts
	4 Lecture Exams	each	72.5 pts	=	290 pts
	Final Exam				150 pts
	Lecture Total				500 pts

Overall Class Points	625 pts
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Academic Responsibility & Integrity

I encourage students to work and study in groups. However, projects submitted for a grade must reflect your own work and understanding of the material. Academic dishonesty will be dealt with following the rules on academic misconduct in the current UWSP handbook and, at a minimum, a score of 0 on the assignment. Egregious and/or repeated problems will result in an F in the course. Each student is expected to act with honesty and integrity, and must respect the rights of others to learn in a safe, respectful and inviting environment.

Please do not hesitate to contact me if you have any questions or concerns.

Disability Services

UWSP is committed to providing reasonable and appropriate accommodations to students with disabilities and temporary impairments. If you have a disability or acquire a condition during the semester where you need assistance, please contact the Disability and Assistive Technology Center on the 6th floor of Albertson Hall (library) as soon as possible. DATC can be reached at DATC@uwsp.edu or (715) 346 - 3365.

Opportunities to Get Help

Tutoring in Math and Science (TIMS) in the Tutoring-Learning Center (TLC) offers free group and drop-in sessions to support you in your chemistry classes. In addition, TIMS offers the option for individual chemistry tutoring sessions. The tutors are UWSP students who have done well in their classes and who are here to share their successful study habits and chemistry content knowledge to help others succeed. Discussing chemistry concepts and practicing problems together clarifies and solidifies knowledge, and the tutors are eager to study with you. If you have questions about the schedule or would like to make an appointment, please visit the TLC in room 018 ALB, email (tlctutor@uwsp.edu) or call (715) 346-3568 for information.

Chemistry Help – Fall 2017

Name	Day	Time	Location	Cost
Drop-in Tutoring	Mon – Thurs	See TLC Drop-In Schedule	DUC 205	Free
Supplemental Instruction	Mon – Fri	See TLC Website	See TLC Website	Free
One-on-One	Mon – Fri	By appointment	Sign up in TLC, 018 ALB Mon - Fri 9 a.m. - 4:30 p.m.	May have fee

Important Dates

September 5 th	Classes begin
September 14 th	Last day to drop a 16-week course without a grade
November 10 th	Last day to drop a 16-week course
November 22 nd	Thanksgiving break begins at 6 p.m.
December 15 th	Last day of classes
December 20 th	Final Exam, 12:30 – 2:30 p.m.

Lab Notebooks You must **use pen** when writing in your lab notebook.

Before going to lab:

1. Update the table of contents (possibly called the record of contents in your notebook) with appropriate date, experiment title and starting page number of the experiment.
2. Experiment title
3. Experiment purpose. Write one or two sentences stating what you are hoping to determine or learn from this experiment.
4. Procedure outline or flowchart. This should NOT be a copy of the lab manual! Briefly outline or draw a flowchart summarizing the experiment. For example, include amounts and types of chemicals, important times (for example: heat for 10 minutes), and instruments used.
5. Data tables prepared in advance. Every table should have a descriptive title and table number (example: Table 1 Masses of Unknown Liquid #1), column and/or row headings – including units) and enough room to fill in the appropriate data. Your data tables do NOT need to be perfect! If you have questions, ask your lab or lecture instructor BEFORE lab.

During Lab

1. At the start of lab, fill out the top of a lab notebook grading rubric. Open your notebook to the appropriate page and your lab instructor will check it over and fill in the pre-lab rubric.
2. As you do the experiment, fill in missing information to the procedure and record your results in the appropriate data tables
3. **If you make a mistake anywhere in your notebook, cross the mistake out with a SINGLE LINE and INITIAL next to the mistake.** You should still be able to read the original information! Example: ~~110.5 g~~ *112.4 g* Not appropriate: ~~110.5 g~~ 112.4 g
4. Write a brief conclusion or summary.
5. Sign and date ALL pages of your lab notebook.
6. At the end of lab, hand in your notebook copies, rubric and post-lab questions.

CHEM 105 Lab Notebook Grading Rubric

Name: _____

Experiment: _____

Section: _____

Item	√
<i>To be Completed by the Lab Instructor (pre-lab):</i>	
Updated table of contents	
Experiment title	
Experiment purpose	
Brief procedure or flow chart	
Data tables prepared in advance	
All entries made in ink	
Lab Instructor Signature/initials:	
<i>To be Completed by the Lab Grader (post-lab):</i>	
Date and signature present at the bottom of each page with data	
All data present in tables with titles, headings, and units	
Data errors appropriately labeled and corrected	
Results summary and/or conclusion	
Total Number of missing/incorrect Items	

Score on post lab questions	
Lab notebook deductions	
Overall Lab Score	

Notes: √ means item is present and correct.

0.25 pts will be deducted for each missing/incorrect item

Tentative Course Schedule

The instructor reserves the right to change this schedule as needed. Suggested readings, suggested practice problems from your textbook and important dates will be announced at the start of lecture. If you miss class be sure to talk to your classmates about any announcements. Any additional changes to the schedule will be announced via email and/or D2L.

Week	Dates	Chapters Covered			Other Important Dates
		Tues.	Thurs.	Fri.	
1	9/5 – 9/8	Intro & 1	1	1 & 2	Sun. 9/10 Homework 1 Due
2	9/12 – 9/15	2	2	3	Tues. 9/12 Homework 2 Due
3	9/19 – 9/22	3	3	3	Tues. 9/19 Homework 3 Due
4	9/26 – 9/29	4	Exam #1	4	Tues. 9/26 Homework 4 Due
5	10/3 – 10/6	4	4	4	
6	10/10 – 10/13	5	5	5	Tues. 10/10 Homework 5 Due
7	10/17 – 10/20	5 & 6	Exam #2	6	Tues. 10/17 Homework 6 Due
8	10/24 – 10/27	6	6 & 7	7	Lab Practical (during lab)
9	10/31 – 11/3	7	7	7	Tues. 10/31 Homework 7 Due
10	11/7 – 11/10	7	Exam #3	7 & 8	Tues. 11/7 Homework 8 Due
11	11/14 – 11/17	8	8	8	
12	11/21 – 11/24	8	<i>No Class</i>	<i>No Class</i>	Tues. 11/21 Homework 9 Due
13	11/28 – 12/1	8	8	9	
14	12/5 – 12/8	9	Exam #4	9	Tues. 12/5 Homework 10 Due
15	12/12 – 12/15	9	Lab Exam	9	Sun. 12/17 Cumulative Homework Due
Wednesday 12/20 – Final Exam 12:30 – 2:30 p.m.					