

# Chem 106 Syllabus Fundamental Chemistry Spring 2017

## Contact Information

Instructor: Dr. Amanda Jonsson  
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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	Research, Projects & Grading	106 Lab 11 B140	Class Prep	Research, Projects & Grading	Research, Projects & Grading
9:00			106 Disc 11 A112		
10:00	<b>Office Hour</b>		Class Prep		
11:00	106 Lab 13 B140	<b>Office Hour</b>	106 Disc 12 A112		
12:00		Research, Projects & Grading	106 Disc 13 A112		
1:00			106 Disc 14 A112	<b>Office Hour</b>	
2:00	Class Prep	Class Prep	<b>Office Hour</b>	Class Prep	Seminar / Meeting
3:00	106 Lecture A121	106 Lecture A121	Research, Projects & Grading	106 Lecture A121	
4:00	Meeting				

## Meeting Times

*Lectures:* 3 – 3:50 p.m. Monday, Tuesday, Thursday

*Room:* Science A121

### Lab/Discussion:

Section	Discussion (Room)	Lab (Room)	Lab Instructor (Office)
11	W 9 – 9:50 (A112)	T 8 – 10:50 (B140)	Amanda Jonsson (B145)
12	W 11 – 11:50 (A112)	F 8 – 10:50 (B140)	Arin Lemke (B147)
13	W 12 – 12:50 (A112)	M 11 – 1:50 (B140)	Amanda Jonsson (B145)
14	W 1 – 1:50 (A112)	T 11 – 1:50 (B140)	Gary Shulfer (B131)

## 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.

### Online Homework

You must purchase a registration code for SmartWork, the online homework system we will be using this semester. Go to <http://smartwork.wwnorton.com> and create a SmartWork account and self-enroll in our class following the “First Time User” instructions on the

website. You will need an email address, an enrolment key for our course (**CHEMAT11576**), and a registration code from W.W. Norton.

The registration code is a proof-of-purchase that allows students to access the SmartWork system. You can purchase a registration code on the <http://smartwork.wwnorton.com> website. There is a free two-week trial period. However, after 14 days you will be locked out of your account until you purchase a registration code. When you purchase a registration code, make sure to select our textbook (Chemistry: An Atoms Focused Approach). The online homework access alone is \$25 (you can also purchase access to the ebook of the textbook for an addition fee, but this is NOT required). NOTE: for SmartWork to work properly, you need to have Adobe Flash installed on your computer.

#### Lab Manual

Chem. 106 Lab Manual – Spring 2017, UW-Stevens Point. This lab manual is available for purchase at the University Bookstore.

#### Lab Notebook

Lab notebook with carbonless self-copy pages. An appropriate notebook is available for sale at the University Bookstore for \$15. You may purchase an equivalent notebook but the pages must have numbers printed on them, not have perforations on the permanent pages and you must be able to hand in a copy of your notebook pages at the end of lab.

#### Scientific Calculator

Your calculator must be able to do logarithms and scientific notation. **You will not be allowed to use graphing calculators, calculators with an alphabetic keyboard, or other electronic devices such as cell phones, tablets, etc. on 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. A continuation of Chemistry 105.

### **Course Learning Outcomes**

1. Be able to use qualitative and quantitative skills to solve chemistry problems.
2. Be able to use chemical theories to explain chemical and/or physical phenomena.
3. Be able to organize and present data in such a way as to draw reasonable conclusions.
4. Be able to demonstrate appropriate and safe laboratory procedures.
5. Be able to discuss the purpose of chemicals and chemistry in our lives.

### **This Course Meets the Following General Education Learning Outcomes**

1. Identify the basic taxonomy and principles of the scientific method as it pertains to the natural, physical world.
2. Infer relationships, make predictions and solve problems based on an analysis of evidence or scientific information.

3. Apply scientific concepts, quantitative techniques and methods to solving problems and making decisions.
4. Describe the relevance of some aspect of the natural sciences to your 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 (to the best of your abilities), refrain from using technology (ipods, laptops, cell-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.

### Study Guides

To help you learn the material in this course, and to try to make my expectations of you as clear as possible, I will provide you with a study guide for each chapter. The study guides will include

- A list of the things I expect you to be able to do by the time you take an exam.
- A list of any key equations for the chapter (THESE WILL BE PROVIDED ON THE EXAMS).

### 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

The Americans with Disabilities Act (ADA) is a federal law requiring educational institutions to provide reasonable accommodations for students with disabilities. If you have a disability and require classroom or exam accommodation, please register with the Disabilities Services office and then contact me within the first two weeks of the semester. In order to receive accommodations, you must have documentation of your disability on file with the Office of Disability Services. In addition, you must provide me with an Accommodations Request Form (available on their website). You must have me sign the form and return it to the Office of Disability Services.

### Grading

Your grade in this course will be broken down into two components, a laboratory component and a lecture component.

Lab Reports – You will be completing 13 laboratory exercises during the semester. Most reports are worth 10 points. One lab will take 2 weeks to complete and that report will be worth 20 points. **Lab make-ups are not allowed for any reason.** Your lowest 10-point lab report grade will be dropped.

SmartWork Homework – We will be using the SmartWork online homework system this semester. There will be 10 homework assignments due throughout the semester, each worth 10 points.

Lecture Exams – There will be a total of 2 exams given during lecture. Lecture exams will last 50 minutes.

Midterm and Final Exams – On Tuesday, March 27<sup>th</sup> from 6 – 8 p.m. there will be a cumulative midterm exam. This midterm will cover material from the first part of the semester. At the end of the semester is a cumulative final exam, covering all material from the semester.

**Students who must reschedule an exam should make arrangements before the exam takes place. Students who need a make-up for an unforeseeable event 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	11 One-Week Lab Reports	each	10 pts	=	110 pts
	Two-Week Lab Report				20 pts
	Lab Total				130 pts
Lecture	10 SmartWork Homework	each	10 pts	=	100 pts
	2 Lecture Exams	each	75 pts	=	150 pts
	Midterm Exam				125 pts
	Final Exam				145 pts
	Lecture Total				520 pts

<b>Overall Class Points</b>	<b>650 pts</b>
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Assuming you pass both the lecture and lab components, your grade in the overall course will be determined by adding the points you have earned in the laboratory component to those earned in the lecture component.

Your grade in both the lab component, lecture component, and in the overall course will be found using the scale shown below.

% Total Points	Grade	% Total Points	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\*\*\*\***

**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 chemistry 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. Talking about chemistry and working problem sets together helps to clarify and solidify knowledge, and the tutors are eager to help. If you have questions about the schedule or would like to make an appointment, please visit room ALB 018, email ([tlctutor@uwsp.edu](mailto:tlctutor@uwsp.edu)) or call (715) 346-3568 for information.

**Chemistry Help - Spring 2017**

Name	Day	Time	Location	Cost
Drop-in Tutoring	Mon.- Thurs.	<a href="#">See Drop-In Schedule</a>	Drop-in Tutoring Center, DUC 205	Free
Group Tutoring and Supplemental Instruction (SI)	Mon. – Fri.	<a href="#">See TLC Website</a>	<a href="#">See TLC Website</a>	Free
One-on-One	Mon. – Fri.	By appointment	Sign up in TLC- ALB 018 Mon.-Fri. 9 a.m. - 4:30 p.m.	May have fee

**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. 106 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 the exam to start studying.

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

- Before coming to class each day, quickly review your notes from the previous day. This will remind you of what we have covered and of any questions you would like cleared up before we move on to new material.
- Attend class! This includes all lecture and discussion periods. If you have to miss a class, get notes from another student, check D2L for any handouts, review that material and then go to office hours if you need additional help.
- 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, reread sections of the book, or talk to the professor to keep filling in the gaps until things make sense.
- 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! The answer to any end-of-chapter exercise with a bold number can be found in the back of the text.
- Before an exam, try to work as many problems as possible without flipping through your notes or looking at an example problem. Make at least some of your study time look as much like an exam as possible. Put away notes, handouts, books, and any distractions. Then try some practice problems. If you get truly stuck on a problem, put

the problem away. Then take out your notes and review that material again. When you are confident in your abilities, put your notes away and try the problem again.

*Remember, on an exam you do not have an example to look at or someone to help you start the problems.*

**Important Dates**

January 23 <sup>rd</sup>	Classes begin
February 1 <sup>st</sup>	Last day to drop a 16-week course without a grade
April 7 <sup>th</sup>	Last day to drop a 16-week course
May 12 <sup>th</sup>	Last day of classes
May 17 <sup>th</sup>	Final Exam, 2:45 – 4:45 p.m.

**Tentative Course Schedule**

The instructor reserves the right to change this schedule, including homework due dates and/or exam dates as needed. Any changes will be announced in advance in class and/or through D2L/email. If you miss class be sure to talk to your classmates about any announcements.

Week	Dates	Description	Important Dates
1	1/23 – 1/27	Chapter 10	Sun. 1/29 Review HW Due
2	1/30 – 2/3	Chapter 10	
3	2/6 – 2/10	Chapter 11	Tues. 2/7 Chapter 10 HW Due
4	2/13 – 2/17	Chapter 12	Tues. 2/14 Chapter 11 HW Due
5	2/20 – 2/24	Chapter 12 / Chapter 13	Wed. 2/22 Chapter 12 HW Due <b>Thurs. 2/23 – Lecture Exam #1</b>
6	2/27 – 3/3	Chapter 13	
7	3/6 – 3/10	Chapter 13 / Chapter 14	
8	3/13 – 3/17	Chapter 14	Mon. 3/13 Chapter 13 HW Due
<i>Spring Break!</i>			
9	3/27 – 3/31	Chapter 14	<b>Tues. 3/28 – Midterm Exam 6 – 8 p.m.</b>
10	4/3 – 4/7	Chapter 15	Tues. 4/4 Chapter 14 HW Due
11	4/10 – 4/14	Chapter 15	
12	4/17 – 4/21	Chapter 15	Tues. 4/18 Chapter 15 part 1 HW Due
13	4/24 – 4/28	Chapter 15 / Chapter 17	Wed. 4/26 Chapter 15 part 2 HW Due <b>Thurs. 4/27 – Lecture Exam #2</b>
14	5/1 – 5/5	Chapter 17 / Chapter 21	Sun. 5/7 Chapter 17 HW Due
15	5/8 – 5/12	Chapter 21	Fri. 5/12 Cumulative HW Due
<b>Wednesday 5/17 – Final Exam 2:45 – 4:45 p.m.</b>			