

# Chemistry 105 Syllabus

## Fall 2021

**Professor:** Dr. Jim Lawrence

**Office:** CBB 410 Fourth floor, west side office hallway

**Phone:** 346-3699

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**Office Hours:** Monday 1:00-2:00, Thursday 12:00-1:00, Friday 1:00-2:00

I always appreciate students coming by to talk. Although I have office hours listed, you should feel free to come to my office at any time.

Talking to students, whether about this class or any subject, is my favorite part of being a professor.

### Times:

Lecture: MWF 11:00 AM CBB 135

Discussion: T 11:00 AM CBB 135

Lab: 02L1 = Tuesday 2:00 – 4:50 CBB 226

02L2 = Thursday 2:00 – 4:50 CBB 226

### Required Material:

**Textbook:** Tro; Chemistry; Structure and Function, 2<sup>nd</sup> edition. Available at text rental.

**Lab Manual:** Lab information

**Calculator:** A scientific calculator with scientific notation will be virtually indispensable for this course.

**Canvas:** Most of our material will be available on Canvas. You will need to sign up and be able to use Canvas.

### Course Description:

CHEM 105. Fundamental Chemistry. 5 cr. (Two semester basic course) 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. 3 hrs lec, 1 hr disc, 3 hrs lab per wk. Prereq: Math 90 or placement in 100 or above. (See notes 1,3,4,5.) (I, II) GDR:NS

### Class Notes

Lecture overheads will all be on Canvas.

### Academic Morality

Your career as a student is closely linked to your participation. Simply put, the more you put into your studies, the more you will get out of your education. This is as true for school as it is for life. However, in spite of this, some students feel the need to resort to cheating, plagiarism and other academic misconduct. I will do everything I possibly can

to prevent this type of behavior. I reserve the right to assign seats, video tape and/or photograph test sessions. I am also likely to use multiple test versions to ensure academic honesty. There will be absolutely no cell phones, cameras or other electronic devices, except for calculators, allowed in any test sessions.

Below is the UWSP Academic Misconduct policy

**UWSP 14.03 ACADEMIC MISCONDUCT SUBJECT TO DISCIPLINARY ACTION.**

Academic misconduct is an act in which a student:

1. Seeks to claim credit for the work or efforts of another without authorization or citation;
  2. Uses unauthorized materials or fabricated data in any academic exercise;
  3. Forges or falsifies academic documents or records;
  4. Intentionally impedes or damages the academic work of others;
  5. Engages in conduct aimed at making false representation of a student's academic performance; or
  6. Assists other students in any of these acts.
- Examples of academic misconduct include, but are not limited to: cheating on an examination; collaborating with others in work to be presented, contrary to the stated rules of the course; submitting a paper or assignment as one's own work when a part or all of the paper or assignment is the work of another; submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas; stealing examinations or course materials; submitting, if contrary to the rules of a course, work previously presented in another course; tampering with the laboratory experiment or computer program of another student; knowingly and intentionally assisting another student in any of the above, including assistance in an arrangement whereby any work, classroom performance, examination or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.

The penalty for any academic misconduct is an F for the course grade.

**Tentative lecture schedule:**

Week of:	Material Covered		
	Monday	Wednesday	Friday
Aug 30	Summer	Summer	Chapter E
Sept 6	No Class	Chapter 1	Chapter 1
Sept 13	Chapter 2	Chapter 2	Chapter 3
Sept 20	Chapter 3	Chapter 3	Chapter 3
Sept 27	Chapter 4	<b>Exam 1</b>	Chapter 4
Oct 4	Chapter 4	Chapter 4	Chapter 5

Oct 11	Chapter 5	Chapter 5	Chapter 5
Oct 18	Chapter 5	Chapter 6	Chapter 6
Oct 25	Chapter 6	Chapter 7	<b>Exam 2</b>
Nov 1	Chapter 7	Chapter 7	Chapter 8
Nov 8	Chapter 8	Chapter 8	Chapter 8
Nov 15	Chapter 8	Chapter 8	Chapter 9
Nov 22	Chapter 9	Chapter 9	<b>No Class</b>
Nov 29	Chapter 9	<b>Exam 3</b>	Chapter 10
Dec 6	Chapter 10	Chapter 10	Chapter 10

We will cover a large amount of material in this class. As a result, we will have to work quickly. The actual pace of the lectures may deviate from this schedule depending on several factors. It is my goal to move quickly, yet at a pace that allows everyone to grasp the material and not be constantly overwhelmed. I may have to slow down at some points throughout the semester to more thoroughly cover some material. In the event that we have to slow down, we may not cover all of the chapters and topics listed in the schedule.

Some other very important dates:

Sept. 14 <sup>th</sup>	Last day to drop a course so that course will not appear on student record
Nov. 5 <sup>th</sup>	Last day to drop a course; W will appear on student record

**Final Exam:** Thursday, December 16<sup>th</sup>, 2:45 – 4:45 CBB 161

## Lab Schedule

Week of:	UWSP Experiment
Aug 30	<b>No Lab</b>
Sept 6	Check In & Lab Safety*
Sept 13	Exp #1. Basic Laboratory Techniques
Sept 20	Exp #2. Density & Graphing
Sept 27	Exp #3. Law of Definite Proportions
Oct 4	Exp #4. Water Content of a Hydrated Salt
Oct 11	Exp #5. Intro to Light and Matter
Oct 18	Exp #6. Spectrophotometric Determination of Iron
Oct 25	Exp #7. Molecular Structure
Nov 1	Exp #8. Separation of a Mixture
Nov 8	Exp #9. Chemical Reactivity
Nov 15	Exp #10. Vinegar Titration
Nov 22	<b>Thanksgiving No Lab</b>
Nov 29	Exp #11. Constant Pressure Calorimetry
Dec 6	Exp #12. Gas Evolution
Aug 30	<b>Finals Week No Lab</b>

## Grading Opportunities

- Exam = 100 points each (3 X 100 = 300 points total)
- Labs = 10 Points each (10 X 12 = 120 points total)
- Final Exam = 150 points
  - 570 points total

I will not be grading on a curve. Grades will be given according to actual points earned divided by total possible points awarded during exams, problem sets and labs. I reserve the right to lower the percentages required to achieve each grade if class performance dictates such a correction. I will not raise the percentages under any circumstance. In no case will the adjustment result in requiring more than the averages listed below for any grade. There will be no extra credit, individual or group, awarded in this class.

**A** = 93% or greater    **A<sup>-</sup>** = 90-92%  
**B<sup>+</sup>** = 88-89%    **B** = 83-87%    **B<sup>-</sup>** = 80-82%  
**C<sup>+</sup>** = 78-79%    **C** = 73-77%    **C<sup>-</sup>** = 70-72%  
**D<sup>+</sup>** = 68-69%    **D** = 60-67%  
**F** = Below 60%

## **Simple, Effective Ways to Increase Your Satisfaction and Success Throughout Your Academic Career.**

### **1. Be comfortable socially with campus life.**

- a. Do become active with the social aspects of UWSP
  - i. Live on campus, at least for a while
  - ii. Join a sports team, intramural team, organization or group on campus
  - iii. Make friends and spend time with them
  - iv. Form study groups
- b. People who don't get comfortable with their social surroundings seldom excel academically.

### **2. Show up for class every time**

- a. This sounds easy, but, for most students, it is the most often broken rule to success. This is your life. You need to show up.
- b. There is no website, textbook or resource that is a substitute for being present at lectures, labs or discussion sections.
- c. You can't succeed anywhere in life if you choose not to show up. You might as well get used to it now and start forming good work habits.

### **3. Read the textbook BEFORE lecture**

- a. You can read the textbook the night before the exam, but it's going to largely waste your time and frustrate you greatly.
- b. If you read the text before the lecture instead of after, you will have a much deeper and clearer understanding of the material. Also, it won't sound like I am simply blithering on and on. You'll actually GET what I'm saying instead of having to somehow sort it all out later by yourself
- c. Take notes on the text as you read. Note any material that is unclear to you and ask questions in class or come see me directly about it.

### **4. Talk to your professors**

- a. Professors are not scary people. I am here to help you learn and will do just about anything to help you succeed. We are a team in every sense of the word. You can not succeed without me and you certainly cannot succeed without you. Use both you and me to the fullest extent possible.
- b. It is a fact that students who come to talk with their professors throughout the semester routinely out perform other students.

### **5. Do the work routinely**

- a. The exams will be very similar to the homework (graded and ungraded) problems and questions. If you regularly read, work problems sets and do home work assignments you are very likely to find yourself performing well on exams.
  - i. Athletes, musicians, etc. don't just show up for a performance and expect to excel. That would be ridiculous. Instead they prepare daily, for months, even years, just to be ready for the opportunity to perform once.
  - ii. If you train as a student like an athlete or musician does, working a bit every day, you will enable yourself to perform at the highest possible level on exam day.