

Please read through the syllabus carefully to see what to expect this semester. If you have any questions or concerns, please don't hesitate to contact me via e-mail (nbowling@uwsp.edu).

Quick Overview of the Lecture Course

1. This syllabus only covers your responsibilities for the lecture portion of the course. You also have responsibilities related to the laboratory portion. You can learn about these in the laboratory syllabus provided in Canvas.
2. You will have a homework assignment of book problems every non-exam week for Chem 325. You will turn these problems via scan and upload to Canvas and answer a few multiple-choice questions related to the problems.
3. We will have 70 pt exams every few weeks on Friday. On the 2nd Monday after each exam, you will have the opportunity to take a "make up" exam that will either replace your exam score or give you extra credit.

My Information and Schedule

Dr. Nathan Bowling

Office: CBB 442

Lab: CBB 436

nbowling@uwsp.edu

Phone: 715-346-4253

Availability: I am available to help you with Chem 325 questions in any of the unshaded blocks below. During Chem 399/325 blocks, I encourage you to make appointments with me via email for 1-on-1 help with Chem 325. When I have no appointments scheduled during these times, I will be assisting my Chem 399 research students.

	Monday	Tuesday	Wednesday	Thursday	Friday
08:00	<i>Preparation and Grading</i>	<i>Preparation and Grading</i>	<i>Preparation and Grading</i>	Chem 325 Lab 01L2, 420/426	<i>Preparation and Grading</i>
09:00	<i>Preparation and Grading</i>	Chem 399/325 Appointments	<i>Preparation and Grading</i>	Chem 325 Lab 01L2, 420/426	<i>Preparation and Grading</i>
10:00	Chem 325 Lec 01, CBB 105	Chem 399/325 Appointments	Chem 325 Lec 01, CBB 105	Chem 325 Lab 01L2, 420/426	Chem 325 Lec 01, CBB 105
11:00	Office Hour	Chem 399/325 Appointments	Office Hour	Chem 399/325 Appointments	Office Hour
12:00	Chem 399/325 Appointments	Chem 399/325 Appointments	Chem 399/325 Appointments	Chem 399/325 Appointments	Chem 399/325 Appointments
13:00	Chem 399/325 Appointments	Chem 399/325 Appointments	Chem 399/325 Appointments	Chem 399/325 Appointments	Chem 399/325 Appointments
14:00	Chem 399/325 Appointments	Chem 325 Lab 01L4, 420	Chem 399/325 Appointments	Chem 325 Lab 01L3, 420/426	Meeting or Seminar
15:00	Chem 399/325 Appointments	Chem 325 Lab 01L4, 420	Chem 399/325 Appointments	Chem 325 Lab 01L3, 420/426	Chem 399/325 Appointments
16:00	Chem 399/325 Appointments	Chem 325 Lab 01L4, 420	Chem 399/325 Appointments	Chem 325 Lab 01L3, 420/426	Chem 399/325 Appointments

Description of the Course

Unless a modality change is mandated by UW-System or UWSP, or a circumstance would arise where I became incapable of teaching in-person, Chem 325 lecture will be taught entirely in-person for the fall 2022 semester. Students are expected to attend every in-person lecture and laboratory meeting. Students should immediately communicate any absences due to illness, quarantine, emergency, or University-sanctioned event (e.g. athletic competition) and should expect that any make-up opportunities will be in-person.

CHEM 325. Organic Chemistry. 4 cr. (Two semester course)

Prereq: Chem 106, 117, or equivalents (grade higher than D+ is required).

The structures of the molecules that make up our world are not insignificant. In fact, it is the structure that determines the function and properties of a given molecule. This first semester of organic chemistry will serve as an introduction to organic structure and function beginning with Lewis structures, resonance forms, atomic orbitals and molecular orbitals. Students will learn how to use modern instrumentation such as infrared (IR) and nuclear magnetic resonance (NMR) spectrometers in order to identify and characterize these structures. Students will learn how different properties, such as boiling point, melting point, and acidity can arise from different organic functional groups. We will study the conformations of linear alkanes, cycloalkanes, and the stereochemistry of organic molecules to better understand the three-dimensionality of organic molecules. Finally, students will be shown how organic structure relates to reactivity in substitution, elimination, and addition reactions.

Required Resources

Text: "Organic Chemistry", Fifth Edition by Smith. McGraw-Hill 2017. (ISBN-13: 978-0-07-802155-8).

Available from text rental.

Lab Manual: posted on Canvas page.

Highly Recommended – copies available in library and chapter-by-chapter on Canvas

Student Study Guide/Solutions Manual to accompany Smith Organic Chemistry. Fifth Edition. McGraw-Hill 2016. (ISBN: 978-1259637063). Available on three-hour reserve at the library.

Semester Schedule:

Week		Monday	Wednesday	Friday
#1	Sept. 6 – Sept. 9			
#2	Sept. 12 – Sept. 16			Canvas HW Quiz #1
#3	Sept. 19 – Sept. 23			Exam #1
#4	Sept. 26 – Sept. 30			Canvas HW Quiz #2
#5	Oct. 3 – Oct. 7	Exam #1 make up		Canvas HW Quiz #3
#6	Oct. 10 – Oct. 14			Exam #2
#7	Oct. 17 – Oct. 21			Canvas HW Quiz #4
#8	Oct. 24 – Oct. 28	Exam #2 make up		Canvas HW Quiz #5
#9	Oct. 31 – Nov. 4			Exam #3
#10	Nov. 7 – Nov. 11			Canvas HW Quiz #6
#11	Nov. 14 – Nov. 18	Exam #3 make up		Canvas HW Quiz #7
#12	Nov. 21 – Nov. 23			
#13	Nov. 28 – Dec. 2			Exam #4
#14	Dec. 5 – Dec. 9			Canvas HW Quiz #8
#15	Dec. 12 – Dec. 15	Exam #4 make up		Final Exam: Friday, Dec. 16 th 8:00 am – 10:00 am

Grading Breakdown:

Item	Points
Lab Points	105 pts
Canvas Homework Quizzes (8 x 10 pts)	80 pts
Hour Exams (4 x 70 pts)	280 pts
Final Exam (100 pts)	100 pts
	565 pts

Typical Grade Cut-offs for Lecture: [100-90% = A or A-], [89-80% = B+, B, or B-], [79-70% = C+, C, or C-], [69-60% = D+ or D], [$< 60\%$ = F]. *You must earn a minimum of 60% (228/380 pts) of the Hour and Final Exam points to receive a passing grade in the course, regardless of how you perform in lab.*

Course Learning Objectives

Students who succeed in the course will be able to:

- ✓ Predict the physical properties and chemical reactivity of simple organic molecules
- ✓ Propose products and reasonable mechanisms for chemical reactions based on a fundamental understanding of organic chemistry
- ✓ Propose efficient syntheses of simple organic molecules
- ✓ Use a variety of characterization data to identify organic compounds
- ✓ Safely prepare, purify, and characterize organic compounds and appropriately document and present their laboratory work

How to succeed in my organic chemistry course:

- ✓ Engage in every lecture experience. Take notes and work practice problems as they are introduced. Ask questions if you have them.
- ✓ Read all of the suggested text carefully, making a concerted effort to *understand* the material. Work through the sample problems as you go.
- ✓ Do all of the suggested problems in a separate notebook designated for this purpose. Show your work and do not look at the book, your notes, or an answer key until after you are done. After checking your answers, re-read the sections with material that gave you the most trouble. If that does not clear things up, schedule a visit with me.
- ✓ Do not try to memorize your way through this course! Success in organic chemistry requires you to understand a few major concepts and several exceptions and caveats. **You will be tested on your understanding of the material, not your ability to memorize.**
- ✓ Commit 6-10 hours by yourself per week to studying/learning organic chemistry outside of class time.
- ✓ Stop me in lecture if you don't understand something.
- ✓ Come to office hours whenever you need a topic cleared up. If my office hours don't work for you, feel free to schedule an appointment via e-mail.

What to know about quizzes and exams:

Quizzes:

- The weekly Canvas “quiz” is more of a homework assignment than a quiz.
- I will give you a study guide that tells you what reading to do and what problems to write down.
- You will scan and upload your completed written work, which will be graded on a scale of 1-5 for completeness and neatness.
- You will answer some Canvas multiple-choice questions worth a total of 5 points.
- You will have 30 min to do this between 8 pm Thursday and 10 am Friday.
- You must not get any assistance with the quiz questions, including help from a friend or tutor!
- The hand-written work you submit must be your own and not copied from another person. Any violation of this will be treated as academic misconduct.

Exams:

- Each hour exam will be closed book, given during class time.
- To be eligible for a “retake,” you must have submitted all of the homework assignments on time and to completion.
- Eligible students can choose to substitute the retake exam for their original score (out of 70 pts) or to have it count as bonus pts (up to 7 pts)
- Retaking exams is not compulsory. Students can opt out by simply not showing up on those scheduled Mondays. There is no penalty for missing a retake exam other than receiving no extra credit.