

SPRING 2021 CHEM 162A (SLN 12010)

Synchronous Lectures

MWF 10:30am – 11:20am PDT

Zoom Meeting ID: 996 4725 7885

Passcode: CHEM162A

Synchronous sessions will be recorded and (barring technical glitches) available via Canvas site.

Course Website

<https://canvas.uw.edu>

Registration Questions

Chemistry Department Undergraduate Services | chemugs@uw.edu

Course Instructor

Dr. Samantha Robinson | sjconnel@uw.edu

Lab Instructor

Dr. Andrea Carroll | ageddes@uw.edu

Teaching Assistants

Lead TA: Sarah Zeitler | szeitler@uw.edu

Mark Bertolami | mberto@uw.edu

Jake Busche | buschj@uw.edu

Tyson Carr | tacarr@uw.edu

Abbie Ganas | abbieg@uw.edu

Griffin Ruehl | gruehl@uw.edu

Garrett Santis | gds001@uw.edu

COURSE SECTIONS

Student participation in Zoom in synchronous discussion section (50-minute time on Thursdays) and synchronous lab section (170-minute time) is expected. Zoom links in Canvas.

Section	Teaching Assistant	Discussion Section	Lab Day	Lab Time
AA	Mark Bertolami	8:30am – 9:20am	Monday	2:30pm – 5:20pm
AB	Garrett Santis	9:30am – 10:20am	Monday	2:30pm – 5:20pm
AC	Tyson Carr	12:30pm – 1:20pm	Tuesday	9:30am – 12:20pm
AD	Garrett Santis	8:30am – 9:20am	Tuesday	9:30am – 12:20pm
AE	Abbie Ganas	3:30pm – 4:20pm	Tuesday	1:30pm – 4:20pm
AF	Griffin Ruehl	4:30pm – 5:20pm	Tuesday	1:30pm – 4:20pm
AG	Jake Busche	3:30pm – 4:20pm	Wednesday	1:30pm – 4:20pm
AH	Tyson Carr	4:30pm – 5:20pm	Wednesday	1:30pm – 4:20pm
AI	Jake Busche	1:30pm – 2:20pm	Thursday	9:30am – 12:20pm
AJ	Griffin Ruehl	2:30pm – 3:20pm	Thursday	9:30am – 12:20pm
AK	Mark Bertolami	10:30am – 11:20am	Thursday	1:30pm – 4:20pm
AL	Sarah Zeitler	11:30am – 12:20pm	Thursday	1:30pm – 4:20pm

COURSE MATERIALS & CONNECTIVITY

Except where indicated, all items are required and available through the University Bookstore.

- **Chemical Principles**, 6th ed., Atkins/Jones/Laverman
(custom-split Chem 162 version contains Chapters 4, 6, 7, 10, 16, 17, 18, 19, and 20 as well as the introductory Fundamentals Section and the student solutions manual for these chapters).
- **UW General Chemistry 162 Laboratory Manual, Autumn 2020-Summer 2021**, Hayden McNeil
e-book link available through UW Bookstore or Labs Canvas site
Note that you do NOT need goggles and lab coats this quarter - Labs will be attendance-required synchronous Zoom sessions with your TA at the times published in the UW Time Schedule.
- **Scientific calculator**
- **ALEKS access**. Purchase online: www.aleks.com
See ALEKS info on the course website for more information. If your financial aid is delayed, contact your instructor for a temporary access code.

Internet and Instructional Technology

- **Access to a computer or tablet**
 - Need a device? Try [Student Technology Loan Program](#) funded by Student Technology Fees
- **Daily online access**
 - Canvas (canvas.uw.edu)
 - Zoom (washington.zoom.us)
 - ALEKS (aleks.com)
 - Gradescope (www.gradescope.com)
- **Internet access**
 - Students in WA State w/o broadband internet service: visit [WA State Drive-in wifi hotspots](#)
 - Students outside of WA State: search for local options for free wi-fi access provided in response to the impacts of the COVID-19 pandemic (libraries, drive-in locations, etc.)
- **For Zoom Discussion and Lab Sessions you must be able to participate by voice.**
 - If your computer/tablet does not have a working microphone, you may need to log in with your phone as well as your computer/tablet.
- **Ability to convert a sheet of paper and/or file into a pdf.**
 - *You do NOT need a printer or separate scanner for this course, but submissions cannot be a group of individual image files.*
 - Free scanning apps are available for smartphones (such as Genius Scan and Scannable) – the Gradescope instructions page of the Labs site has more details for using these apps.
- **[UW Academic Support Programs Technology Access webpage](#)**
 - Information and resources for technology access during remote learning.

LEARNING OBJECTIVES

Students who successfully complete CHEM 162 will be able to

- Explain the properties of chemical molecules using bonding models, including hybridization and molecular orbital theory, with the understanding of their limitations.
- At a beginning level, analyze spectroscopic results to determine the structure of molecules.
- Use isomerism (structural, geometric, and stereo) to explain variation in chemical and physical properties.
- Explain macroscopic properties based on intermolecular forces within the chemical system.
- Describe the structure and properties of the liquid and solid states, as well as phase changes, at the particulate and macroscopic levels.
- Explain the chemical, physical, and thermodynamic properties of solutions at the particulate and macroscopic level.
- Apply bonding models to the structural study of organic molecules and transition metal coordination complexes.
- Illustrate the concepts of kinetics, thermodynamics, and equilibria through application to organic and transition metal chemistry.
- Develop skill in visualizing the particulate level as related to the concepts above.
- Relate empirical observations, particularly in the laboratory portion of the course, to concepts listed above.
- Develop laboratory, data analysis, and scientific writing skills.

COURSE COMPONENTS & GRADING

The course consists of:

- 3 synchronous sessions per week – Recordings will be posted in Canvas
Note – recordings are generally not available for several hours after class. We will do our best to provide complete recordings, but occasional technical glitches may result in incomplete recordings.
- 1 synchronous discussion section per week – with TA via Zoom. Participation credit is awarded for group work during the call. Sessions will NOT be recorded.
- 1 synchronous laboratory session in certain weeks of the quarter: 1 orientation and 5 labs. See the 162 Laboratory Resources page of the course website for details. Labs will be attendance-required Zoom sessions with your TA at the times published in the UW Time Schedule. Sessions will NOT be recorded.
- Daily work in the ALEKS online learning environment
- Online prelab assignments and online submission of post-lab reports
- Online quizzes and exams

The point distribution for the evaluative components of the course is as follows:

Exams	60%
4 midterm exams (12% each, drop lowest)	36%
1 final exam	24%
Participation	5%
10 discussion sections (0.5% each, drop 2 lowest)	4%
Auxiliary Assignments	1%
ALEKS Objectives & Mastery	20%
Laboratory	15%
TOTAL	100%

The final median GPA in Chemistry 162 generally falls between 2.6-2.9.

It is the Chemistry Department's policy not to make grade changes of 0.1 after final class grades are submitted to the UW Registrar.

Your scores for the various assignments, reports, and exams will be recorded using the online Gradebooks in Canvas.

The lab assignments will be recorded on the Chem 162 Lab Resources page and all of the course component scores from ALEKS, 162 Labs site in Canvas, and/or Gradescope will be migrated to the Chem 162 course gradebook periodically throughout the quarter.

ACADEMIC ETHICS

Original work performed in good faith is assumed on all assignments and course components.

The Student Conduct Code prohibits several forms of academic misconduct, including: (see [section 7: Prohibited Conduct](#))

- Cheating
- Falsification
- Plagiarism
- Unauthorized collaboration
- Engaging in behavior specifically prohibited by an instructor
- Recording and/or dissemination of instructional content without express permission of the instructor

You are required to sign and submit an honor code statement for this course, in which you will affirm your acknowledgment of what constitutes academic misconduct in this course as defined below. Failure to adhere to this code of ethics will result in referral for possible disciplinary action as described in the Student Conduct Code.

General policies for all course assignments

Your submissions for ALL assignments (including but not limited to homework assignments, lab reports, quizzes, and exams) should be your own individual work unless you are explicitly told otherwise by your instructor.

You are strictly prohibited from sharing any content from ANY assignment (including but not limited to homework assignments, lab reports, quizzes, and exams) with any website or app (including but not limited to Discord, Chegg, Course Hero, and Snapchat) or any other course content repository (virtual OR physical) that is not explicitly approved by the instructor. This prohibition applies both during the quarter that you are taking this course and any time after the course ends.

Specific policies for exams and quizzes

During exams and/or quizzes, you may not seek out or accept any input from ANY other individual, whether or not they are a classmate. Further, you may not provide assistance to other students during the availability window for an exam or quiz unless an instructor explicitly allows for that collaboration.

Specific policies for lab reports

During remote learning, it is presumed that the data you submit in your lab reports is only what was provided to you by your instructor.

All data analysis and written/typed calculations and responses that you submit should be yours alone.

We understand that it can be difficult for students to discern what constitutes good-faith teamwork on lab reports, and what constitutes plagiarism or cheating. While we often find examples of explicit plagiarism in which lab reports are directly copied from a student in the current quarter or an earlier quarter, we also find many cases of students “over collaborating,” resulting in reports that are essentially identical or extremely similar with only minor edits made to achieve minimal differences between the reports. This does not meet our expectation that you are submitting your own independent work. In short, if you have not done something yourself, do not attempt to pass it off as original work. If you have questions about what might cross the line, please do not hesitate to ask your lab or class instructor prior to submitting your work. You will not get in trouble for asking this type of question!

CLASSROOM CLIMATE

UW Chemistry is committed to a welcoming and inclusive classroom environment. Diverse backgrounds, embodiments, and experiences are essential to the critical thinking endeavor at the heart of university education. Therefore, I expect you to follow the UW Student Conduct Code in your interactions with your colleagues and me in this course by respecting the many social and cultural differences among us, which may include, but are not limited to: age, cultural background, disability, ethnicity, family status, gender identity and presentation, citizenship and immigration status, national origin, race, religious and political beliefs, sex, sexual orientation, socioeconomic status, and veteran status. Please talk with me right away if you experience or observe disrespect in this class, and I will work to address it with you.

ACCESS AND ACCOMMODATIONS

Your experience in this class is important to us, and it is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law. Disability Resources for Students (DRS) offers resources and coordinates reasonable accommodations for students with disabilities. If you have not yet established services through DRS, but have a temporary or permanent disability that requires accommodations, you are welcome to contact DRS at 206-543-8924 or uwdrs@uw.edu or visit disability.uw.edu.

Note for students with DRS accommodations for extra time with quick turnaround and/or long-term assignments: The Department of Chemistry recognizes universal access to education and has built in significantly more time than needed to complete lab reports (see above) to allow greater flexibility and access for all students, including those with disabilities. As such, no additional time is needed. If you are unable to complete the assigned work within the time period, you should contact your TA for further guidance.

RELIGIOUS ACCOMMODATIONS POLICY

Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at [Religious Accommodations Policy](http://ReligiousAccommodationsPolicy). Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request form (<https://registrar.washington.edu/students/religious-accommodations-request/>).

KEYS TO SUCCESS

- Participate in class sessions, pay close attention, engage with the material, and take notes.
- Learning chemistry is a sequential process. Understanding today's material gives you insight to understanding the material for tomorrow.
- As with all courses at UW, your instructors and TAs will assume that you are studying at least two hours for each hour of lecture and one hour for every hour of lab.
- Find a place that allows for periods of uninterrupted study.
 - Do the practice problems in the textbook sections for the next lecture.
 - Working in shorter, more frequent sessions in ALEKS will be more efficient than long, marathon sessions.
 - Do end of chapter problems – don't rely on the solutions!
- Make daily, weekly, and quarterly learning plans and follow those plans.
- Practice! Work on suggested end-of-the-chapter problems as well as topics in ALEKS - focus on understanding the concepts and general processes, not just memorizing how to solve a specific problem.
- Visit office hours! We're here to help!