
General Chemistry with a Biological Focus

CHM 12901 Course Packet Fall 2022

Professors

Dr. Shalini Low-Nam (she/her), Co-Instructor & Course Coordinator
Email: slownam@purdue.edu

Dr. Jeanine Conklin (she/her), Co-instructor
Email: jaconkli@purdue.edu

Lecture Coordinator Lab Supervisors

Ms. MaryClaire Cooke (she/her), cooke19@purdue.edu

Mr. Kristos Negron (he/his), negronk@purdue.edu

Ms. Shanica Brown (she/her), brow1678@purdue.edu

Mr. Zhengrui Zhang (he/his), zhan3248@purdue.edu

Recitation Supervisors

Ms. Kadidia Samassekou (she/her), ksamasse@purdue.edu

Mr. Eric Glasser (he/his), eglasser@purdue.edu

General Chemistry Office, BRWN 1144, 765-494-5250, Email Contact: genchem@purdue.edu, Walk-In Hours: see Brightspace

The General Chemistry Office handles administrative details associated with the course. Non-chemistry questions about the course should be directed to this office. For example, contact the office to discuss accommodations, to obtain grade checks, and to get signatures on university forms such as drop/add.

Note: In person visits to the General Chemistry office are subject to posted guidelines and may involve mandatory mask wearing (completely covering nose and mouth) and maintenance of at least 6-feet of social distancing. Please observe the posted regulations.

Course Description

Chemistry 12901 (CHM12901) is an accelerated, one-semester general chemistry course geared toward biology, biochemistry, pharmacy, and pre-health majors. This course is part of a 1-2-1 curriculum; the one semester of general chemistry is followed by 2 semesters of organic chemistry and 1 semester of biochemistry. We will use the atoms first approach to general chemistry. Topics covered during this semester include atoms and molecules, atomic structure and periodic trends, bonding and geometry, intermolecular forces, chemical reactions, kinetics and equilibrium, nuclear chemistry, acids and bases, thermodynamics, and oxidation and reduction. This course has been designed to include a biological context, in addition to foundational concepts, wherever possible. We emphasize application and problem-solving skills through regular homework and laboratory experiments. Note that you must be enrolled in lab (which meets weekly), in addition to the lecture.

The expected prerequisite for CHM 12901 is a year of general chemistry (most often at the high school level). If you have not previously taken a course in general chemistry or it has been an extended period since your last exposure to this material, please take advantage of the numerous support mechanisms and review materials (on our course webpage on Brightspace) that we provide and consider additional resources that may enhance your success.

During the Fall 2022 term, CHM12901 will be a face-to-face (F2F) course. If you are not present on the West Lafayette campus during the term, you should not be enrolled in CHM 12901. Following the guidance of the Protect Purdue Pledge and university policies, we summarize our course policies below. Please be aware that policies may be updated, as appropriate, and clarified and disseminated. We will do our best to minimize disruptions and maximize your success. We rely heavily on electronic announcements to share key information; please check your email and Brightspace regularly. Thank you

for your efforts in following these policies and in adjusting to modifications that become necessary. Please correspond with Dr. Low-Nam, the course coordinator, if you have any concerns or questions.

Course Structure

CHM 12901 consists of the following components, which will be further detailed throughout this packet. Brightspace: <https://purdue.brightspace.com/d2i/login> is the primary course management site and should be monitored regularly (recommended daily). Links to lectures, course announcements, learning objectives, grades, and other information will be posted on Brightspace. A primary software package for the course will be Gradescope (<https://www.gradescope.com/>). It will be important for you to gain proficiency in using Gradescope; resources and examples will be included in the course packet and posted to Brightspace.

Lectures	3 lectures per week (M, W, and F) will be delivered in WTHR 200 There are two lecture sections: CHM12901-001 (11:30 am – 12:20 pm) and CHM12901-002 (1:30 – 2:20 pm) CRNS: 10402 and 24552, respectively Your lecture section is on your class schedule Lectures will be recorded via Boilercast and uploaded to Brightspace.
Labs	Thursday or Friday in Chaney-Hale Hall of Science You will attend <u>one lab section each week</u> Your lab section timing and location are on your class schedule
Recitation	All recitations will be on Tuesday Your recitation section timing and location are on your class schedule
Course information	Brightspace, https://purdue.brightspace.com/
Examination Platform	Exams are scheduled for in-person delivery If virtual delivery of exams becomes necessary, we will use the platform: Gradescope, https://www.gradescope.com/ You will launch Gradescope from our course Brightspace page Exam regrade requests will be handled using Gradescope; upon a regrade request, the entire exam is subject to rescoring
Homework Platform	McGraw Hill CONNECT, you will launch CONNECT from our course Brightspace page

Each lab section will be led by a teaching assistant (TA). Most TAs are graduate students in the Chemistry Department; some TAs are outstanding undergraduate students who performed well in CHM12901 and have strong chemistry backgrounds. Your TA should be your first point of contact with respect to questions related to the course content. TA contact information, including weekly office hours, will be posted on Brightspace.

Protect Purdue Pledge

“Being a part of the Boilermaker community means that each of us must take extraordinary steps to stay well and persistently protect each other, on campus and in the community. Accountable together, I pledge to take responsibility for my own health, the protection of others and help keep the Purdue community safe from spread of COVID-19 and other infections as identified and instructed by the university.” <https://protect.purdue.edu/pledge/>

When you attend lecture, recitation and lab, you are required to follow any mask guidelines that are in place and we ask for your cooperation in participating in the public health precaution requests made by

your instructors (Professors and TAs). The Protect Purdue Plan, which includes the Protect Purdue Pledge, is campus policy and, as such, all members of the Purdue community must comply with the required health and safety guidelines. Required behaviors in this class include:

- staying home and contacting the Protect Purdue Health Center (pphc@121.health) if you feel ill or know you have been exposed to the virus,
- wearing a mask in classrooms and campus buildings according to policies (e.g., no eating/drinking in the classroom),
- disinfecting desk/workspace prior to and after use, where appropriate,
- refraining from moving furniture,
- avoiding shared use of personal items,
- maintaining robust hygiene (e.g., handwashing, disposal of tissues) prior to, during and after class,

Students who are not engaging in these behaviors (e.g., wearing a mask) will be offered the opportunity to comply. If non-compliance continues, possible results include instructors asking the student to leave class and instructors dismissing the whole class. Students who do not comply with the required health behaviors are violating the University Code of Conduct and will be reported to the Office of the Dean of Students (ODOS) with sanctions ranging from official reprimand to dismissal from the university.

Any student who has substantial reason to believe that another person in a campus room (e.g., classroom) is threatening the safety of others by not complying (e.g., not wearing a mask) may leave the room without consequence. The student is encouraged to report the behavior to and discuss next steps with their instructor. Students also have the option of reporting the behavior to the Office of the Student Rights and Responsibilities (<https://www.purdue.edu/odos/osrr/>).

Diversity Statement

In CHM 12901, we are committed to valuing every member of our course community and we believe that everyone plays a role in contributing to our collective success. We expect that every individual will demonstrate respect for the different experiences, beliefs, and values expressed by students and staff involved in this course. We support Purdue's commitment to diversity and equity, and welcome everyone, regardless of race, age, religion, sex, sexual orientation, gender expression, gender identity, or disability, or other intersectional identity. For more information, see: <http://www.purdue.edu/diversity-inclusion/> and https://www.purdue.edu/purdue/ea_eou_statement.php

Mental Health

If you need mental health services, Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of mental health support, services are available. For help, such individuals should contact Counseling and Psychological Services (CAPS) at 765-494-6995 and <http://www.purdue.edu/caps/> during and after hours, on weekends and holidays, or by going to the CAPS office of the second floor of the Purdue University Student Health Center (PUSH) during business hours.

If you find yourself beginning to feel some stress, anxiety and/or feeling slightly overwhelmed, try WellTrack, <https://purdue.welltrack.com/>. Sign in and find information and tools at your fingertips, available to you at any time.

If you need support and information about options and resources, please see the Office of the Dean of Students, <http://www.purdue.edu/odos>, for walk-in hours (M – F, 8 am – 5 pm).

Disability Accommodations

If you require accommodations to access course activities or materials, we will do our very best to work with you to support your success. Please work with the Disability Resource Center (DRC), Young Hall Room 830, 302 Wood Street, 765-494-1247, www.purdue.edu/drc to get these accommodations described and approved. To implement accommodations, you must follow the instructions in the letter provided by the Disability Resource Center, *in addition to* doing the following:

Within the first three (3) weeks of the semester or within one week of the date of the letter, you *are required to* do at least one of the following: (1) electronically share a copy of the letter with Melissa Roadruck (genchem@purdue.edu) or (2) schedule an appointment via email (genchem@purdue.edu) or (3) take a copy to the General Chemistry Office (BRWN 1144) during walk-in hours to discuss your accommodations. *Implementation of accommodations may not be possible if insufficient notification is given.*

Basic Needs Security

We acknowledge that everyone has basic needs including, but not limited to, food and housing. We would like everyone to have these needs met so that they can also maximize their academic success. There are many ways that Purdue can support these needs for those who may be struggling or experiencing insecurities. The Office of the Dean of Students is a good starting point for understanding these resources; you may also use the following:

- ODOS overall resources portal and the Critical Need Fund.
- The ACE Campus Food Pantry (open to the entire Purdue community)
- The Center for Advocacy, Response & Education (open to the entire Purdue community) “provides support and advocacy for survivors of sexual violence, dating violence, and stalking.

Emergencies

In the event of a major campus emergency, course requirements, deadlines, and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances beyond the instructor’s control. Relevant changes to will be posted on Brightspace and shared via announcements and email.

“**Shelter in Place**” means seeking immediate shelter inside a building or University residence. This course of action may need to be taken during a tornado, earthquake, release of hazardous materials in the outside air, active shooter, building intruder, or a civil disturbance. If you hear the **All Hazards Outdoors Emergency Warning Sirens** or are notified via text or other means, immediately go inside a building to a safe location and use all communication means available to find out more details about the emergency. **Remain in place** until police, fire, or other emergency response personnel provide additional guidance or tell you it is safe to leave. There is no “all safe siren;” the notification will come via text, internet, or email announcement.

For more information, please see: https://www.purdue.edu/ehps/emergency_preparedness/

Absence Policies

General Attendance Policy

CHM 12901 will be conducted face-to-face to our fullest capacity. We expect you to participate in in-person recitations and labs whenever you are fully healthy. However, please take appropriate precautions if you are feeling unwell. You should not attend any in-person activities if you are running a fever or are ill. Absence accommodations approved by the **Disability Resource Center** will be handled individually. Contact Melissa Roadruck (genchem@purdue.edu) for more information. If you experience an absence that is expected to be for an extended period (normally a week or more), you should contact the ODOS. As a courtesy to the student, a member of the Dean of Students staff will notify your instructor(s) of the circumstances. An appropriate resolution to cover coursework and assessment will be reached in discussion with the student, as much as possible.

In general, a student can contact ODOS to provide a notice for absences related to hospitalization, emergency department, or urgent care visits. Documentation of the visit should be provided to ODOS to support the absence. However, excused absences will not be provided for primary medical care appointments. Following are specific circumstances that could lead to absences and our corresponding course policies:

Grief Absence Policy for Students (GAPS)

If you experience the death of a family member or close friend, notify the Office of the Dean of Students at 765-494-1747. As a general rule, scores for any missed assignments under a verified GAPS absence will be pro-rated (assigned a score based on your average for the assignment type you missed), but please communicate with your TA and the course instructor to ensure appropriate and fair assessment.

Military Absence Policy for Students (MAPS)

If you are required to complete mandatory military training, notify the ODOS to request that a notice of the leave be sent to instructors. Scores for any missed assignments covered under a verified GAPS absence will be pro-rated (assigned a score based on your average grade for that type of assignment).

Medically Excused Absence Policy for Students (MEAPS)

If you experience an emergent or urgent care absence, notify the Office of the Dean of Students (ODOS) at 765-494-1747. MEAPS guidelines are covered in the Attendance Section of Academic Regulations with some clarification on the ODOS website. As a general rule, scores for any missed assignments under a verified GAPS absence will be pro-rated (assigned a score based on your average for the assignment type you missed), but please communicate with your TA and the course instructor to ensure appropriate and fair assessment.

COVID-19-related absences

Academic Guidance in the Event a Student is Quarantined/Isolated

If you become quarantined or isolated at any point in time during the semester, you should follow the guidance of the Protect Purdue Health Center before any return to class activities. You should also communicate with the Course Coordinator (Dr. Low-Nam) via email as soon as possible. We will make arrangements based on your particular situation. The Office of the Dean of Students (odos@purdue.edu) is also available to support you should this situation occur.

Attendance Policy during COVID-19

Students should stay home and contact the Protect Purdue Health Center (pphc@121.health) if they feel ill, have any symptoms associated with COVID-19, or suspect they have been exposed to the virus. A student needs to inform the Course Coordinator (Dr. Low-Nam) of any conflict that can be anticipated and will affect the submission of an assignment or the ability to take an exam. Only the Professors (Conklin and Low-Nam) can excuse a student from a course requirement or responsibility. When conflicts can be anticipated, such as for many University-sponsored activities and religious observations, a student should inform the Course Coordinator of the situation as far in advance as possible. When a student is unable to make direct contact with the Course Coordinator and is unable to leave word with the General Chemistry Office because of circumstances beyond the student's control, and in cases of bereavement, quarantine, or isolation, the student or the student's representative should contact the Office of the Dean of Students via email or phone at 765-494-1747.

Purdue Academic Calendar

These dates follow the published academic calendar but may be subject to change; please follow updates provided on Brightspace for official schedule information.

Classes begin Monday, August 22

No classes Labor Day, Monday, September 5

October Break, Monday and Tuesday, October 10-11

Thanksgiving Vacation, November 23-26
Last day of classes, Saturday, December 10

Adding/ Dropping/Changing Sections

CHEMISTRY DEPARTMENT DEADLINES FOR ADDING OR SWITCHING SECTIONS

Fri. Aug. 26: last day to add CHM 12901 or switch lab sections *without* instructor approval

Fri. Sept. 9: last day to add CHM 12901 with instructor approval*

Fri. Sept. 19: last day to switch lab sections *with* instructor approval*;

UNIVERSITY DROP DEADLINES

Fri. Sept. 2: Last day to drop (cancel) a course via MyPurdue without it appearing on your record

Tues. Oct. 25: Last day to drop (cancel) a course with a grade of "W." *

**If you use a paper Add/Drop form (Form 023), it must be signed by your advisor and delivered to the General Chemistry Office, to obtain a signature for the instructor. See cover page for General Chemistry Office hours and contact information.*

Adding the Course/Late Registration: Students are usually not permitted to add CHM 12901 after week 2 of the semester (Fri. Sept. 2).

Changing Sections: To change a lab section, approval of the professor will be required after the first week of classes; in general, switching is discouraged and may be very difficult to accommodate. Due the processes associated with assigned lab drawers and Brightspace and CONNECT enrollment, we will not make a section change for students after Week #3 of the semester. If you change sections after you check into a locker drawer, you must check out of your old locker drawer before checking into a drawer in your new section.

Dropping the Course/Lab Check-out:

If you drop the course by September 18, you do NOT need to formally check out of the laboratory. After that date, you MUST check out with your TA to avoid a penalty fee.

If you drop CHM 12901 after that date, it is your responsibility to check-out of your assigned drawer during the next scheduled lab period or during the regularly scheduled Check-Out. If you do not check out immediately, then go to lab at the regularly scheduled starting time during lab check-out as listed on the lab schedule and check out of your locker drawer. **You will need to be properly dressed for laboratory work and wear safety goggles through the entire check-out process (full description of proper dress appears later).**

Failure to Check-Out of Lab: For anyone who does not check out of a lab locker drawer by the scheduled or designated time:

- he/she/they will be charged a \$45 fee and
- he/she/they forfeits the right to determine the acceptability of all locker drawer equipment.

Academic Integrity: **Your integrity is your greatest asset.**

The professors in CHM 12901 view academic dishonesty (i.e. cheating) as a serious offense; we hope that cheating never arises as a problem in this course. The Office of the Dean of Students' publication, *Academic Integrity: a Guide for Students*, is an excellent summary of expectations for Purdue students and is available at: <http://www.purdue.edu/odos/osrr/academic-integrity/index.html>

"Dishonesty in connection with any University activity may result in informal action or disciplinary sanctions. Cheating, plagiarism, or knowingly furnishing false information to the University are examples

of dishonesty. The commitment of acts of cheating, lying, stealing, and deceit in any of their diverse forms (such as the use of ghost-written papers, the use of substitutes for taking examinations, the use of illegal cribs, plagiarism, and copying during examinations) is dishonest and must not be tolerated. Moreover, knowingly to aid and abet, directly or indirectly, other parties in committing dishonest acts is in itself dishonest." *From University Senate Document 72-18.*

In CHM 12901, academic integrity means demonstrating your own work and thought processes at all times. We strongly encourage collaboration and group study but sharing your answers and work for the purpose of letting other students copy it is unacceptable. Using online resources such as Chegg to gain answers to homework or exam questions is not allowed. Instructors can obtain user information from Chegg when quiz or exam questions are posted there. For any exams in CHM 12901 that are virtual (on Gradescope), collaboration with others (such as Group Me, Zoom, Chegg, discussion boards, internet searches, text, in-person, etc.) is prohibited.

While the following list of examples of academic dishonesty is not complete, the examples are provided for your information. If you have any questions at all about permissible behavior, ask before acting.

- Copying or possessing an unauthorized crib (written or electronic) during an exam
- Copying from another student's exam OR allowing another student to copy from your exam.
- Copying lab data or lab reports (part or all). This includes electronic files as well as paper copies.
- Not generating your own charts and graphs.
- Giving your lab report to someone else to copy.
- Changing data for a lab project to fit the perceived answer.
- Using or reporting someone else's data in a report as if it were your own.
- Working together on prelab exercises, but not putting the work in your own "style."
- Submitting a lab report or other work that you did not do.

In CHM 12901, academic dishonesty will, at a minimum, result in a score of zero for that assignment plus a report to the Office of the Dean of Students. Academic dishonesty could result in a grade of "F" in the course plus a report to the Office of the Dean of Students.

Definitions: Plagiarism and unauthorized collaboration are prohibited in CHM 12901.

- **Plagiarism:** "using the exact language of someone else without the use of quotation marks and without giving proper credit to the author" or "stealing someone else's ideas and presenting them as your own" (from ODOS brochure referenced above).
- **Unauthorized collaboration:** copying directly from another student's work (e.g. prelab) or not contributing equitably to the group or pair's effort in lab

This course packet is a contract between CHM 12901 students and instructors. If a student violates the contract by committing an act of academic dishonesty, the instructor reserves the right to alter the terms of the contract (including grading policies) at his/her discretion.

Students who observe an issue of academic integrity can report it to the Office of the Dean of Students (<https://www.purdue.edu/odos/> - see academic dishonesty report), call 765-494-8778 or email integrity@purdue.edu.

THINGS THAT YOU MUST DO DURING WEEK #1:

- Purchase required materials.
- Install the HotSeat App on your laptop computer (can also be installed on Apple mobile phones)
- Register for CONNECT through the course Brightspace page only!
- Read all the information in this course packet and watch the welcome video(s) on Brightspace, if you have not already done so
- Complete the appropriate *Reading Assignments* posted on Brightspace
- Complete Self-Assessment Test (if you have not already done so)
- Complete the safety certification available on the course Brightspace page with a score of at least 20/25; this is due by August 29. You must complete your safety certification before you can work in lab.
- Attend recitation.
- Do NOT register your materials on the CONNECT website directly.

Required Materials

- Registration/Access code for **CONNECT** online homework & e-book (can be purchased with the textbook). Purchase through Brightspace via CONNECT or McGraw-Hill store link.
- HotSeat App for Recitation quizzes
- **Textbook:** OPTIONAL PHYSICAL VERSION of CHEM12901: Purdue General Chemistry with Biological Focus (Purdue University Edition), e-book or any version of the 4th edition of “**Chemistry: Atoms First**” by Overby and Burdge
- Digital Materials Charge: Students enrolled in this course must purchase digital materials for lab. The materials will be released online on a real-time (approximately weekly) basis during the Fall 2022 semester. You will purchase access to the digital materials via a Purdue Online link provided to you in myPurdue and on the Brightspace page. Payment is due by September 2, 2022.
 - Link for CHM 12901 (\$35): <http://www.eventreg.purdue.edu/online/CHM2022Fall35>
- A virus-free electronic storage device (flash drive or external hard drive) for lab data
- **Approved safety goggles and a face shield.** Goggles may be purchased from the storerooms in the CHAS (laboratory) building on either the first or fourth floor.
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- A Sharpie (black, permanent ink) for marking lab glassware
- The acceptable calculator for this course is a **simple, two-line, non-programmable, battery operated scientific calculator** with exponential, logarithm and square root functions
- **Mask:** It is recommended that you come to class-related activities with a mask be able to wear it if requested.

Suggested Materials

- Highlighter and pens for lecture participation (or tablet or computer if you prefer)
- Self-assessment test

DETERMINING YOUR COURSE GRADE, FALL 2022

We are aware that chemistry can be difficult material for some people to learn. At the same time your professors are eager to support your success and provide a variety of teaching and learning methods that may assist with the learning process. In CHM 12901, you will have the opportunity to learn individually, with partners, and in groups. We encourage you to coordinate learning groups for your study and lab report preparation.

Experts indicate that to adequately learn new material in college, 2-3 hours of effective study outside regularly scheduled class time each week per one (1) credit hour is required. CHM 12901 is a 5-credit course so this suggests that 10-15 hours per week of effective study outside of regular class time is necessary to learn what we want you to learn.

The Chemistry Department provides several sources of help for you in this process at no cost. These include the professors, the CHM 12901 Graduate Instructors (TAs), an undergraduate Supplemental Instructor (SI), and the Chemistry Resource Room (CRR: WTHR 117b).

Each of the assigned course activities for CHM 12901 is worth the number of points listed below. Before course grades are finalized at the end of the semester the following scores will be dropped:

- your lowest homework score
- your lowest two recitation activity scores
- your lowest lab score
- your lowest exam score

The total number of points for CHM 12901 will be distributed as follows:

Homework	180 pts	Best 12 of 13 scaled to 15 pts each
Recitation Activities	165 pts	Best 11 of 13 scaled to 15 pts each
Labs	250 pts	Best 10 of 11 scaled to 25 pts each
Course Packet Quiz	5 pts	REQUIRED
Quiz and Exams	600 pts	Best 4 of 5 exam scores at 150 pts each: 3 Midterm Exams (450 pts) Final Exam is worth 2 exams (300 pts)
TOTAL	1200 pts	

Your final course grade will be based on the following scale out of 1200 total points:

A:	1080 - 1200+ points
B:	960 - 1079.99 points
C:	840 - 959.99 points
D:	720 - 839.99 points
F:	Fewer than 720 points

Plus grades are determined at the instructors' discretion at the end of the semester. No minus grades are given.

* Save all course materials (graded papers and your exams) until after you have received your course letter grade for CHM 12901. If you claim that an incorrect score has been recorded for you, we will need to see your paper(s) before we can consider any change in the score or your course grade.

It is your responsibility to check and verify that your scores posted on Brightspace are correct. Shortly after each of the first three exams and shortly before the final exam, all your scores to date will be available to you at the Brightspace grade book. You must report any errors on any graded material to your graduate instructor (TA) or to the professor within two weeks of the time they were posted. All disputed or missing scores must be resolved with your graduate instructor (TA) or the professor before the final exam. There will be no score correction considerations after the final exam.

SOURCES OF HELP FOR STUDENTS IN CHM12901

TA Office Hours: Each CHM 12901 Graduate Student TA will hold two one-hour office hours each week and each undergraduate TA will hold a one-hour office hour weekly. In office hours, any CHM 12901 student can go to get help with chemistry. If you are having a problem with some aspect(s) of the course, go first to your graduate instructor (TA). He/she wants to help you and is available for consultation both at specific hours and by appointment. Feel free to go to the office hour of another CHM 12901 TA. A complete schedule of office hours and their locations is posted on Brightspace. If you have any questions about office hours contact Leah Everly (leverly@purdue.edu).

Professor: You can go to the professor's office hour. E-mail addresses and office hour times and locations will be provided on Brightspace.

PU General Chemistry Help Site: <http://www.chem.purdue.edu/gchelp/Visualization> and Problem Solving for General Chemistry

Academic Success Center: <https://www.purdue.edu/asc/> Get help with reaching your academic goals.

Supplemental Instruction (SI):

There are Supplemental Instruction (SI) study sessions available for this course. Our SI Leader is a former CHM129 student who excelled in the course and is eager to support the success of current students. These virtual study groups are open to anyone enrolled in this course who would like to stay current with the course material and understand the material better. Please visit Brightspace to access information about connecting with SI sessions for your course(s). Attendance at these sessions is voluntary, but extremely beneficial for those who attend weekly.

Supplemental Instructor: **Ms. Amelia Chuppe (she/her)**, achuppe@purdue.edu

SI Sessions: Sunday, WILY C215, 4:30-5:20 PM EDT

Thursday, WALC B091, 5:30-6:20 PM EDT

Office Hour: Thursday, Location to be posted on Brightspace, 12:30-1:30 PM EDT

On-Line Homework (CONNECT)

Each on-line weekly assignment, deployed via Brightspace on Monday mornings, will consist of required questions and possibly optional questions. Required questions will contribute to your homework point total, while optional questions will not. However, optional questions and tutorials can be used to help understand how to work problems or to practice and/review for exams. Assignments are to be completed on-line accessing CONNECT from the Brightspace page only: <https://purdue.brightspace.com/>

Deadlines for completing the on-line assignments will be listed on the online Brightspace Assignment page. You will have a maximum of three (3) attempts per question per submission to complete each homework assignment before the listed due date. You will be able to submit each homework assignment TWICE. The AVERAGE of the two attempts will be used as your score for the homework. The question and/or answer content and order will be different upon subsequent attempts. Homework will be scored and recorded on-line so there will be no hand grading or regarding of homework.

No time extensions are possible for homework assignments. If you miss the posted homework deadline, you will be able to continue working on the problems and your answers will be graded by the program, but you will not receive points for work done after the deadline. For help with technical issues, contact Connect customer service at 1-800-331-5094 or use the online form at: <https://mhedu.force.com/CXG/s/ContactUs>

Recitation is Required

CHM 12901 recitation sessions are required. You will be scheduled to attend one session; your assigned time and location can be found on your course schedule. You may only attend your designated recitation time and section. In accordance with the Protect Purdue Pledge, if necessary, you will be required to wear a mask while attending recitation. For more information see the "Protect Purdue Pledge".

Recitation problem sets will be accessed via Gradescope. Recitation sessions provide you with the opportunity to ask questions and work with your graduate instructor (TA) and classmates in smaller groups, as much as possible. You will have time to ask questions. Recitation sessions are not long enough to answer all the questions that all students may have. If you have difficulties or have questions about certain problems, you should seek help from your professor or a CHM 12901 graduate instructor (TA) during scheduled office hours.

You will receive a maximum of 15 points per recitation session; 12 points are allocated for effort on the worksheet and 3 are reserved for the weekly recitation quiz. Should you be unable to attend a recitation, the first option will be to drop that week's score; additional accommodations will be made on a case-by-case and need basis. You need to attend a minimum of 11/13 sessions – two are dropped at the end of the semester. Materials for recitation must be legible and submitted via Gradescope by the Sunday following that recitation, no later than 11:59 pm EDT.

Laboratories

Attendance: Attendance is required since CHM 12901 is a laboratory course. We do not offer make-up labs but will coordinate with students who miss labs due to illness or quarantine (if and only if we are notified in a timely manner of the absence, preferably prior to the start of the lab). You are responsible for the material covered in any lab you miss since questions based on the lab projects may appear on exams. Always bring your PUID with you to lab.

Pre-lab: You are expected to read the laboratory experiment and complete the pre-lab exercises (submitted via Gradescope) before coming to lab. It is recommended that you set up an outline or work plan for the experiment as part of your preparation; this can be accessed electronically or carried to lab in a physical version. If you show your TA a completed pre-lab at the beginning of your lab session, you will be eligible for a maximum of half of the points (you must still provide an electronic version for scoring) and you may complete the lab. Required outlines or unannounced quizzes are possible if instructors find that many students are not preparing in advance for lab.

To be eligible for full credit, your pre-lab assignment for the current week's lab is due by the Tuesday preceding the lab, no later than 11:59 pm EDT and should be submitted using Gradescope. If you do not submit your pre-lab or if your pre-lab exercises are not at least 75% complete, you will not be allowed to participate in the lab session and will receive a zero for that lab. You must include a **complete procedure** for the upcoming lab as part of your pre-lab. If you would like to handwrite your procedure, you can submit a scan of that document; you need to bring a printed version or a handwritten original of the procedure to lab. Failure to include the procedure in your pre-lab write-up will result in the loss of points.

Lab project completion: You are required to complete **9 of the 11** scheduled lab sessions to pass the course. Attendance at Check-in and check-out is mandatory.

A failure-to-complete score (zero points) for lab will be assigned in the following cases:

- being dismissed from lab for safety violations including improper dress,
- arriving more than 10 minutes late,
- inadequate preparation for lab that hinders participation,
- not contributing constructively to the group's work in the lab,
- failure to submit a lab report, or
- not participating in preparation of the lab report.

Penalties for failure-to-complete labs are as follows:

- 1st fail-to-complete lab: a score of zero; can be dropped at the end of the semester as the lowest lab grade
- 2nd fail-to-complete lab: score of zero (will be included in calculation of total points)

Safety Certification: To be permitted to work in lab, you must complete the online safety certification found on Brightspace with a score of 20/25 or better. The first lab sessions are September 1; plan to complete your certification by August 31. Make sure to access the Brightspace grade book to check your score. **You will receive a zero for each lab you miss due to an incomplete safety certification.**

Preparation: You are expected to arrive on time, properly dressed, and prepared for lab work. If you arrive at lab more than 10 minutes late or improperly dressed, then you will be considered unprepared to do the lab work and will be asked to leave the lab. **You will receive a zero for that lab and it will count as a fail to complete lab.**

Working with a Lab Partner or Group: You will be working with a partner or group for most of the laboratory projects. One member of the group will upload a copy of the lab report to Gradescope, unless otherwise stated. It is critical that you work together to analyze data and prepare the lab report. You and your partner or group share the responsibility for writing lab reports that honestly reflect your work. **You must include the names of everyone who participated in preparing the lab report.** If you are experiencing difficulties within your group, you should refer to your group contract, signed during the first week of lab, and notify your instructor early in the semester or as soon as possible so the issue may be resolved.

Lab Reports: Each laboratory report is due by the beginning of lab one-week after lab work has been done except where otherwise noted. Physical submissions will not be accepted; completed reports should be uploaded to your section in the folder designated by your TA. All graphs must be computer-generated using a spreadsheet and graphing program such as Microsoft Excel or MatLab. Additional information about the format for lab reports will be provided in lab. Please ensure that figure legends, equations, and titles are legible.

Late Lab Reports: Fifty percent (50%) of the maximum points will be deducted from the score for all late lab reports (including those submitted in partial form that are later uploaded in complete form). No laboratory reports will be accepted and graded beyond 24 hours after the report is due.

Grading Criteria for Lab Reports: Your lab reports will be graded primarily on correctness and completeness. The following guidelines will apply:

- The report is complete.
- The report is organized correctly.
- The presentation is legible and logical. Headings and subheadings are used to identify or describe the contents of a particular section. Graphs and tables have titles to describe the contents.
- The data analysis and calculations have been done with the data your team collected during the lab period.
- The data analysis, including units of measurements and significant figures, are correct.
- Chemical terms and concepts have been used correctly throughout the report.
- Your conclusions and results are consistent with your data and calculations.
- Data are within acceptable error limits.

Questions about Lab Report Grades: If you have a question about the score on any of your lab reports, first ask your graduate instructor (TA) for clarification. If the graduate instructor (TA) cannot answer your questions, you may take the graded lab report to a lab supervisor for possible re-grading. You will need to do this within two weeks after the graded paper has been return via Gradescope. The entire lab report will be regraded, not just the part where you think an error has been made.

Lab Ending Times: The graduate instructors (TAs) must close the laboratories by the end of your scheduled lab period. At that time all equipment must be cleaned and put away, lab drawers locked and lab notes turned in (checked by your TA) so the lights can be turned out and the doors closed.

Safety Policies for Chemistry Labs: The safety of everyone in the active learning environment of a lab is taken seriously and your failure to comply with the safety regulations WILL affect your grade. Complying with safety regulations is simply a minimum requirement for being allowed to work and learn in a chemistry lab.

Compliance with the Safety Regulations is NOT a Matter of Personal Choice or Opinion.
Compliance is a REQUIREMENT.

Safety Goggles (and Face Shields, if instructed by your TA or lab staff): You must always wear appropriate and approved safety goggles (not safety glasses) in the laboratory, including the day of check-out. You must also come prepared with a mask and face shield. You will be dismissed from lab and lose all credit for an experiment or lose your opportunity to check out if you do not wear your safety equipment as required. Safety goggles may be purchased at the local bookstores or the chemistry storerooms. Goggles may be stored in your laboratory drawer in a plastic bag with your name.

Appropriate Clothing: Chemistry department regulations state that you must wear clothing in the laboratory that protects your skin from your neck to your ankles and feet when you are sitting, standing or reaching. Shoes that cover your feet entirely are required. Your best option for chemistry lab attire is a t-shirt, jeans without holes, and sneakers with socks. **If you attend lab in unacceptable attire, you will be sent home and will receive a zero for the lab.**

Unacceptable clothing includes, but is not limited to: sleeveless, low-cut (i.e. below the collar bone), bare midriff or tank tops, see-through, transparent or sheer clothing, pants that are ripped or have holes in the fabric of *any* size that expose your skin, Capri pants, shorts, short skirts, tights, leggings/jeggings, tight exercise pants, open-toed and/or open-heeled shoes (including Crocs, Birkenstocks or other clogs), sandals (with or without socks), ballet flats, slippers, moccasins, or any shoe that doesn't cover the entire top of your foot, with *or* without socks.

Proper Dress: See picture. If you attend lab in unacceptable attire, you will be sent home and will receive a zero for the lab.

Gloves: Gloves serve two purposes: they protect your skin from potential contaminants and keep any potential contaminants inside the lab. You will be required to wear protective gloves for many lab activities. When you leave a lab, take the gloves off and throw them away. Get new gloves when you return to lab.

Contact Lenses: Contact lens wearers are encouraged to wear glasses in the laboratory. If you wear contact lenses in the laboratory, you must inform your graduate instructor (TA) of this at the beginning of the semester.

Hair: If your hair is longer than shoulder length you must tie it behind your head in order to avoid accidental contact with open flames or chemicals that might be on the lab bench. Rubber bands are available in the laboratory.

Food and Beverages: You may not eat, drink, or bring food into the laboratory.

Electronics: The only electronics allowed in the lab is that which is being used for instruction.

Handling and Disposal of Hazardous Materials: You will be required to follow the instructions printed in your lab manual or given to you by the graduate instructor (TA) or others for appropriate handling of hazardous materials and disposal of chemical waste.



Lab Clean Up and Disinfection: You are expected to promptly clean up spills and tidy the laboratory before leaving. Everyone must disinfect their work area and all instrumentation with 70% isopropanol before and after laboratory. You may spray the isopropanol on your table and wipe off with paper towel. For electronic, spray isopropanol on paper towels then wipe the surfaces to disinfect. Ask for help if you are unsure of proper cleaning procedures.

Lab Check-out: Formal check-out begins on September 21st. This means that any students dropping the course on or before September 18th can check-out by merely completing a form at the storerooms. Formal check-out requires each student to inventory the contents of their drawer and replace lost or unacceptable items (chipped, broken, etc). All students must complete one of these procedures if they check-in to our laboratories. Failure to check-out can result in a \$45 fee plus the cost of all items replaced in the drawer.

How Do I Learn From Lectures?

You can't learn from lectures if you do not attend them or do not think about the information as it is presented during lectures.

You are responsible for all material covered and announcements made in lectures.

Before Class

- Complete the assigned reading and review the notes from the previous class.
- Download and print any student notes for lecture from the course Brightspace site.

During class

- Write the date of the lecture on the student notes at the beginning of class if it is not on the first slide.
- Write information that is discussed in lecture but is not on the notes. The professor will give more information than is on the notes.
- Try to answer all the questions that the professor may present.
- Write down each step of every problem or example even if you do not understand the step. You can always ask about it later.
- Write a question mark next to things you don't understand so you can return to them after class.
- Use shorthand or abbreviations so that you can write quickly, but understandably.

After Class

- Review your notes while things are still fresh in your mind.
- Check your text in order to understand those items that you did not understand and marked in lecture. If necessary, use office hours with any CHM 12901 graduate instructor (TA) to help you.
- Never miss lecture. Chemistry is cumulative. What is presented tomorrow depends upon your knowledge of what was covered today. If you will miss class, then get a friend to take notes for you.
- It will take you at least two hours out of class for every hour we spend in class in order to study and learn the material. This means about **8 hours of distraction-free studying and working with chemistry each week**. You may spend this time working on your lecture notes, reading the text, studying the required material, doing CONNECT homework, studying for exams, or other things. You may find yourself spending more than 8 hours per week if your math skills need improvement or if it has been a few years since you took a chemistry course. If you are committed to your goals and dreams then dedicate yourself to spending the necessary time to study and do well.

Finally, your ability to understand what you are currently learning may depend on your already having mastered earlier material. So, study chemistry every day and correct your mistakes as they occur.

When Should I Do Homework?

Your assigned homework is considered to be a minimum requirement for keeping focused and learning the material in each chapter. You should practice solving additional problems from the text similar to those assigned and the additional (optional) problems available on CONNECT.

The following guidelines should be helpful if you want to do well in a technical course such as CHM 12901 which will probably involve relearning concepts or learning concepts that you did not have in your high school chemistry course. Learning new material requires constant re- enforcement, which means you may have to change your study habits.

- Read the assigned pages in the textbook before you attempt any of your homework problems.
- Do some work in chemistry every day. Work at least two chemistry problems each day. If you are drawing a blank about the problem after 10-15 minutes, go on to another a problem. Seek help from a CHM 12901 graduate instructor (TA) the next day during office hours. After a day or so, solve related problems in the text.
- Even though CONNECT usually asks for your final answer only, it is important that you write down your complete problem solutions. You can fool yourself into believing your understand if you do not write your steps. You must practice if you are going to be proficient and efficient during exam times!