

CHEMISTRY 11600
General Chemistry
Fall 2024
4.00 Credit Hours
Instructional Modality: Face-to-Face

Instructor

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Supervisor TAs

Ms. Angeliqe Ithier; e-mail: aithier@purdue.edu (Lecture)
Mr. Osama Abuhammad; e-mail: oabuhamm@purdue.edu (Lab)
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Ms. Isabella Feltenstein; e-mail: ifeltens@purdue.edu (Lab)

Course Description

A continuation of CHM 11500. Solutions; quantitative equilibria in aqueous solution; introductory thermodynamics; oxidation-reduction and electrochemistry; chemical kinetics; qualitative analysis; further descriptive chemistry of metals and nonmetals.

General Chemistry Office

The General Chemistry Office (BRWN 1144; genchem@purdue.edu) handles all the administrative details associated with the course. Direct all non-chemistry questions about the course to this office. For example, contact us to discuss accommodations, to obtain grade checks, to discuss time conflicts, to get clarification on course policies, to resolve grade issues, and to get signatures on university forms such as add/drop forms. We are able to help you with a variety of requests so you can maximize your success in general chemistry.

Class Schedule

You are expected to attend all scheduled lectures, one recitation, and one laboratory each week. The lectures are given (in-person; WTHR 200) at 1:30 pm on Tuesdays and Thursdays (unless otherwise stated). All labs (in-person; CHAS) are held on Wednesdays, and all recitations (in-person; WTHR and BRWN) are held on Tuesdays.

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 this course will be posted on [Brightspace](#) and shared via announcements and e-mail.

You are expected to read your Purdue e-mail on a frequent basis.

E-Mail Communication

To avoid wasted time and duplicated effort, please do not e-mail multiple course or University personnel *individually* about the same issue, rather send *one* e-mail addressed to multiple people. Allow up to two business days (M-F, 8 am - 5 pm) for a response from your instructor, Supervisor TA or TA. In general, we will *not* answer e-mail after business hours (M-F, 8 am - 5 pm). Please be patient in awaiting a response.

Learning Outcomes

By the end of the course, you will be able to:

1. use theory to understand/predict experimental observations,
2. demonstrate an understanding of the physical properties and a molecular understanding of chemical reactivity and materials, and
3. document scientific information and experimental data and write scientific reports, with graphical representation of data.

The course has been designed and structured so that in addition to the treatment of the concepts and topics listed above, there is a simultaneous emphasis on development of problem-solving skills. Laboratories offer an opportunity to reinforce and extend what is discussed in lecture, explore new topics, and to develop your knowledge of chemistry laboratory skills.

The Chemistry 11600 team - the instructor, supervisors, teaching assistants, administrative assistants, and preparations lab staff - are committed and focused on helping you learn chemistry. We know that this is a foundational course for your major and in order to achieve your goals and dreams, you need to do well in the course! Please read on to learn about the required materials, lecture schedule, recommended ways to study, lab policies, grading, and other course policies and procedures.

Foundational Core

CHM 11600 meets the science requirement of the University's foundational core.

Course Information

[Brightspace](https://purdue.brightspace.com/d21/login) (<https://purdue.brightspace.com/d21/login>) is the primary course management site for the course. Assignments, links to lectures and labs, announcements, learning objectives, grades, and other course information will be posted on Brightspace. It will be important for you to learn which site to use for which type of assignment.

Weekly Assignments

During *most* weeks, you will have the following assignments. All assignments will be listed on the course Brightspace page. Refer to details in the relevant sections that follow. Any changes will be announced on Brightspace.

assignment	platform	day due	time due
homework	Achieve	Tuesday	11:59 pm
pre-lab quiz	Brightspace	Tuesday	11:59 pm
lab procedure	Labflow	Tuesday	11:59 pm
lab report	Labflow	Wednesday	11:59 pm

Required Materials

Textbook: The textbook used in Chemistry 11600 is *Chemistry: The Molecular Nature of Matter and Change*, 10th Ed., by M. S. Silberberg and P. Amateis. There are several options available for purchasing a paper and/or electronic version of the book, including purchasing a loose-leaf version with eBook directly from McGraw-Hill for \$59.13. See [Brightspace](#) for further information.

Achieve: In Chemistry 11600, you are required to complete homework online by using the Macmillan Achieve program. You can purchase instant access via the link on [Brightspace](#) (\$41.99 for one semester access or \$63.99 for multi-semester access) or you can purchase a code from a local bookstore that you can then redeem via the link on Brightspace. **You must register for Achieve by using your purdue.edu e-mail address.** If you purchased multi-semester access in a prior semester, then you do not need to purchase access again. Macmillan Customer Service can be reached at 1-800-936-6899 or <https://mhe.my.site.com/macmillanlearning/s/chat-with-us>.

Labflow: You are required to purchase the Labflow program to access the lab manual and to submit pre-lab quizzes and lab reports. See the links and instructions on Brightspace for details.

Office 365: You can download the Teams/OneNote programs for free. Go to <https://www.itap.purdue.edu/shopping/software/product/office365.html> and log in by using your Purdue account.

iClicker Cloud: You will use the free iClicker Cloud app in lecture. Refer to the **Lectures** module on Brightspace for instructions.

Goggles: You are required to obtain and wear (at all times) approved indirectly-vented safety (splash) goggles in lab.

Calculator: You may only use a simple, scientific calculator on exams. Calculators that can graph or solve or store equations are *not* allowed. See [Brightspace](#) (**Exam Information**) for details.

Late Registration

If you register late or experience dropped enrollment, notify the Supervisor TA no later than Friday, September 6 to request make-up assignments or deadline extensions.

Mental Health

We care about your mental health. If you or someone you know is feeling overwhelmed, depressed, anxious, and/or in need of mental health support, please talk with your instructor, your TA, one of the supervisor TAs, your advisor or other trusted person, or seek help from one of the resources below.

- If you find yourself struggling with stress, anxiety and/or starting to feel overwhelmed, try TAO (<https://us.taconnect.org/register>). Sign in with your Purdue login and find effective resources and tools at your fingertips, available to you at any time.
- If you need support and information about options and resources, please contact or see The Office of the Dean of Students (765-494-1747). Hours of operation are M-F, 8 am-5 pm.
- If you find yourself struggling to find a healthy balance between academics, social life, stress, etc., sign up for free one-on-one virtual or in-person sessions with a Purdue Wellness Coach at RecWell. Student coaches can help you navigate through barriers and challenges toward your goals throughout the semester. Sign up is free and can be done on BoilerConnect.
- If you are struggling and need mental health services: Purdue 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) (765-494-6995) during and after hours, on weekends and holidays, or by going to the CAPS office on the second floor of the Purdue University Student Health Center (PUSH) during business hours.

Basic Needs Security

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact The Office of the Dean of Students for support. There is no appointment needed and Student Support Services is available to serve students 8 am - 5 pm, Monday through Friday. Students may submit requests for emergency assistance from the Critical Needs Fund (<https://www.purdue.edu/odos/resources/critical-need-fund.html>).

Diversity Statement (<https://www.purdue.edu/diversity-inclusion/>)

We believe that every student in this course has something of value to contribute. Please take care to respect the different experiences, beliefs and values expressed by students and staff involved in this course. We support Purdue's commitment to diversity, and welcome individuals of all ages, backgrounds, citizenships, countries of origin, disabilities, education, ethnicities, family status, genders, military experiences, political views, races, religions, sexual orientations, socioeconomic status, and work experiences. If you have concerns or feel you have been subject to discrimination, please contact one of

the Supervisor TAs so we can direct you to appropriate resources.

Disability Accommodations

If you require accommodations to access course activities or materials, the accommodations must be described and approved by the Disability Resource Center, Young Hall Room 830, 302 Wood Street, 765-494-1247, <https://www.purdue.edu/drc>. To implement accommodations, you must follow the instructions provided by the Disability Resource Center, *in addition* to doing the following:

Share your “Notification of Course Accommodations” for *all* sections of the course with the CHM 11600 instructors via the AIM system *at least one week before* an exam or assessment for which accommodations are desired. We may require an in-person or virtual meeting to discuss certain accommodations. *Implementation of accommodations may not be possible if insufficient notification is given.* It is the student’s responsibility to submit all exam requests through their Student Accommodation Portal. There is a 5 BUSINESS DAY (OR ONE CALENDAR WEEK) DEADLINE FOR ALL REGULAR EXAM REQUESTS.

Due to the size of the class, students with testing accommodations are expected to schedule and take their examinations through Purdue Testing Services. Students are expected to respond in a timely manner and meet all communicated deadlines to schedule their examinations (including the final) with the Purdue Testing Services. Students with accommodations who fail to respond and fail to schedule their test with the testing center may not be able to have all their accommodations met. Thus, it is critically important that all students read their Purdue e-mail daily and respond in a timely manner to requests or directives, especially if you have accommodations related to testing. Note: e-mail messages about accommodated testing in CHM 11600 will come from Melissa Roadruck (melissa@purdue.edu).

University Drop Deadlines - Fall 2024

August 30: last day to drop (cancel) a course via MyPurdue without it appearing on your record

November 19: last day to drop (cancel) CHM 11600 with a “W”*

Chemistry Department Deadlines for Adding or Switching Sections - Fall 2024

August 23: last day to add CHM 11600 or switch lab sections *without* instructor approval

September 6: last day to switch lab sections *with* instructor approval*

September 6: last day to add CHM 11600 *with* instructor approval*

September 16: last day to switch from another CHM course to CHM 11600 *with* instructor approval*

**Submit request by using Scheduling Assistant.*

LECTURE SCHEDULE (WEEKS 1-8)

Week	Day	Date	Lecture Topic	Chap. ^a
1	T	8/20	Introduction/Concentration Expressions	4,13
	R	8/22	Thermodynamics: Entropy, Free Energy and The Direction of Chemical Reactions	20
2	T	8/27	Thermodynamics: Entropy, Free Energy and The Direction of Chemical Reactions	20
	R	8/29	Thermodynamics: Entropy, Free Energy and The Direction of Chemical Reactions	20
3	T	9/3	Thermodynamics: Entropy, Free Energy and The Direction of Chemical Reactions	20
	R	9/5	Equilibrium: The Extent of Chemical Reactions	17
4	T	9/10	Equilibrium: The Extent of Chemical Reactions	17
	R	9/12	Equilibrium: The Extent of Chemical Reactions	17
5	T	9/17	Equilibrium: The Extent of Chemical Reactions	17
**	W	9/18	Exam I: 8:00 pm - 9:00 pm; BHEE 129, WALC 1055, ME 1130	
	R	9/19	Kinetics: Rates and Mechanisms of Chemical Reactions	16
6	T	9/24	Kinetics: Rates and Mechanisms of Chemical Reactions	16
	R	9/26	Kinetics: Rates and Mechanisms of Chemical Reactions	16
7	T	10/1	Kinetics: Rates and Mechanisms of Chemical Reactions	16
	R	10/3	Kinetics: Rates and Mechanisms of Chemical Reactions	16
8	T	10/8	NO LECTURE (Octoberbreak)	
	R	10/10	Kinetics: Rates and Mechanisms of Chemical Reactions	16

^aTextbook: *Chemistry: The Molecular Nature of Matter and Change*, 10th Ed., by M. S. Silberberg and P. Amateis.

LECTURE SCHEDULE (WEEKS 9-16)

Week	Day	Date	Lecture Topic	Chap. ^a
9	T	10/15	Acids & Bases	4,18
**	W	10/16	Exam II: 8:00 pm - 9:00 pm; BHEE 129, WALC 1055, ME 1130	
	R	10/17	Acids & Bases	18
10	T	10/22	Acids & Bases	18
	R	10/24	Acids & Bases	18
11	T	10/29	Acid-Base Equilibria	18
	R	10/31	Acid-Base Equilibria	18
12	T	11/5	Acid-Base Equilibria	18
	R	11/7	Acid-Base Equilibria	18,19
13	T	11/12	Acid-Base Titrations	19
	R	11/14	Reduction-Oxidation Reactions	4,21
**	R	11/14	Exam III: 6:30 pm - 7:30 pm; PHYS 114, UC 114, FRNY G140, ME 1130	
14	T	11/19	Electrochemistry: Chemical Change and Electrical Work	21
	R	11/21	Electrochemistry: Chemical Change and Electrical Work	21
15	T	11/26	NO LECTURE	
	R	11/28	NO LECTURE (Thanksgiving Break)	
**	M	12/2	“Quiet Period” Begins	
16	T	12/3	Electrochemistry: Chemical Change and Electrical Work	21
	R	12/5	Electrochemistry: Chemical Change and Electrical Work	21

^aTextbook: *Chemistry: The Molecular Nature of Matter and Change*, 10th Ed., by M. S. Silberberg and P. Amateis.

LABORATORY SCHEDULE

Week	Date	Experiment	Possible Points
1	8/21	NO LAB (Compensation for evening exams.)	
2	8/28	Check-in; Lab Safety; Lab Titration Activity	5
3	9/4	Lab 1: A Chemical Oscillation Reaction	20
4	9/11	Lab 2: Thermodynamics and Equilibrium	20
5	9/18	Lab 3: Bromocresol Green Equilibrium Systems	20
6	9/25	Lab 4: Iron(III) Thiocyanate Equilibrium System	20
7	10/2	Lab 5: Factors Affecting Reaction Rates	20
8	10/9	NO LAB (Octoberbreak)	
9	10/16	Lab 6: Chemical Kinetics, Part I	20
10	10/23	Lab 7: Chemical Kinetics, Part II	20
11	10/30	Lab 8: How Much Copper Is In a Penny?	20
12	11/6	Lab 9: Electrolyte and Nonelectrolyte Solutions	20
13	11/13	Lab 10: Preparation of Buffers and Determination of Buffer Capacity	20
14	11/20	Lab 11: Acid-Base Equilibria	20
15	11/27	NO LAB (Thanksgiving Break)	
16	12/4	Check-out (You must attend or you will be charged a \$45 failure-to-check-out fee.)	
TOTAL POINTS POSSIBLE			225

UNIVERSITY AND COURSE POLICIES

Details of the following policies are listed under the ***University Policies and Statements*** module on the CHM 11600 Brightspace page: Academic Integrity, Nondiscrimination, Class Absences, Attendance, Amorous Relationships, Emergency Preparedness, Violent Behavior, and Use of Copyrighted Materials. The ***Student Support and Resources*** module contains links and information about Mental Health, Wellness and Basic Needs Security, Engaging in Your Learning, Web Accessibility, and Brightspace Accessibility Standards.

“As a Boilermaker pursuing academic excellence, I pledge to be honest and true in all that I do. Accountable together - we are Purdue.” ([Purdue Honors Pledge](#))

Attendance and Absences

This course follows Purdue’s academic regulations regarding attendance. Only the course instructor (professor) can excuse a student from a course requirement or responsibility. If you are absent, refer to the information below and the ***Absences*** module on [Brightspace](#) and act accordingly.

You will be responsible for all information, including assignments, policy changes, schedule changes, etc., announced in lecture. Audio/document camera recordings of the lectures (Boilercast) will be accessible via [Brightspace](#).

Excused Absences. Under academic regulations, excused absences may be granted by The Office of the Dean of Students (ODOS) for cases of grief/bereavement, military service, jury duty, parenting leave, or emergent or urgent care medical care (for details, see below). To request make-up work or deadline extensions (lab, homework, or recitation) for *excused* absences, use the forms called “*Excused Absence Lab Make-up Request*” and “*Excused Absence: Request Deadline Extensions*” in the ***Absences*** module on Brightspace.

Student athletes who miss class for NCAA travel should fill out the form called “*Excused Absence Lab Make-up Request*” in the ***Absences*** module on Brightspace to receive the lab make-up assignment. A student athlete must submit their NCAA travel letter to the Supervisor TA to be eligible for a lab make-up assignment.

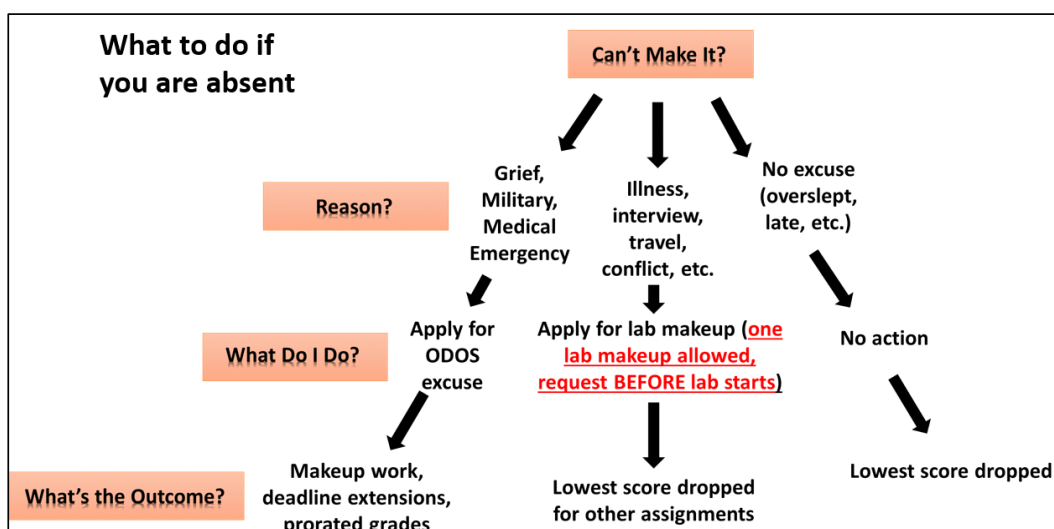
For absences due to academic or professional development activities, students should contact the Supervisor TA at least one week prior to the absence for consideration and fill out the form “*Excused Absence Lab Make-up Request*” in the ***Absences*** module on Brightspace. Documentation of the activity must be provided. Make-up assignments or deadline extensions may or may not be provided, depending on the nature of the activity (according to the judgement of the Instructor).

Other absences will be considered on a case-by-case basis.

Unexcused Absences. To account for *unexcused* absences (e.g., illnesses, trips, conflicts, or other situations), the lowest score for each type of graded activity (recitation, pre-lab quiz, lab report, homework, exam) is automatically dropped at the end of the semester. This includes internet or related technology issues that may have prevented you from completing a lab report, pre-lab quiz, or homework. **Students with unexcused absences are eligible for one lab make-up assignment, per student, per semester**, provided the student applies for a make-up assignment *before* the lab start time. Use the form called “Unexcused Absence Lab Make-up Request” in the *Absences* module on Brightspace to request a make-up lab. No other make-up work or deadline extensions (i.e., for a pre-lab quiz, recitation, homework, or exam) are possible for *unexcused* absences.

Absence Accommodations. Absence accommodations, such as modified attendance, approved by the Disability Resource Center (DRC) will be handled individually. Contact the General Chemistry Office (genchem@purdue.edu) for more information.

Refer to the infographic below for an overview of what to do when you are absent.



Grief Absence Policy for Students (GAPS). If you experience the death of a family member or close friend, fill out the form at <https://www.purdue.edu/advocacy/students/absences.html>. Scores for any missed assignments covered under a verified GAPS absence can be prorated (assigned a score based on your average grade for that type of assignment at the end of the semester) or you can make-up the work. Refer to the *Absences* module on Brightspace for more information or alternatives.

Military Absence Policy for Students (MAPS). If you are required to complete mandatory military training, fill out the form at <https://www.purdue.edu/advocacy/students/absences.html>. Scores for any missed assignments covered under a verified MAPS absence can be prorated (assigned a score based on your average grade for that type of assignment at the end of the semester) or you can make-up the work. Refer to the *Absences* module on Brightspace for more information or alternatives.

Medical Excused Absence Policy for Students (MEAPS). Students may occasionally have to miss class and other academic obligations due to hospitalization or emergency department visits. This policy is intended for **emergent care only (note that urgent care visits are no longer included in this policy)**. **Emergent medical issues are those that pose a threat to loss of life or limb** (e.g., serious burns, seizures, severe cuts requiring stitches, broken/dislocated limbs or joints, head injuries). The Office of

the Dean of Students will not provide notes to instructors for primary care medical appointments or routine care (e.g., overall wellness, dental care, general behavioral health care) nor occasional symptoms (e.g., pink eye, colds, flu).

A student who has experienced a medical emergency as described above should complete the Medical Excused Absence Request Form (<https://www.purdue.edu/advocacy/students/absences.html>) as soon as possible to request that an absence notification be sent to instructors. You will be given the opportunity to make up the work missed due to a medical excused absence. Refer to the *Absences* module on Brightspace for more information on requesting make-up work or deadline extensions.

If your illness is not a medical emergency, then your missed work will be handled either by the one make-up lab policy or the dropped score policy. For special consideration, contact the course instructor. For privacy reasons, we are prohibited from accepting medical documentation, so do not include it.

Academic Integrity

All students are expected to be familiar with Purdue's policies on academic integrity (<https://www.purdue.edu/odos/academic-integrity/>).

Students who observe an issue of academic integrity can report it to The Office of the Dean of Students (<https://www.purdue.edu/odos/> - use the General Incident Report to report anonymously), call 765-494-8778, or e-mail integrity@purdue.edu.

"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 Chemistry 11600, academic integrity means "doing your own work" at all times. Discussion of chemical concepts is encouraged, but sharing your answers and work on social media for the *express purpose* of allowing other students to copy it is not acceptable. Such a use of technology does not help you learn the material and is considered academic dishonesty.

Working together is allowed on lab reports; however, your answers must be *in your own words*. All reports will be analyzed with Turnitin (a plagiarism checker), and students with closely matching reports will be investigated and grade penalties may be applied.

In lab reports, you must cite any sources (including the lab manual) used for your answers. Copying text word-for-word from the lab manual/instructions or any other source is prohibited and will receive no credit. The use of ChatGPT or other AI agents is not banned in the class; however, it should not take the place of your own writing, and you need to ensure that you also confirm facts that are generated because these tools do not check the accuracy of your claims. If you use an AI agent, you must specify the AI agent used, the time and date used, the prompts used to generate text, the sections containing AI-

generated text, and the ideas resulting from AI use.

All collaboration with others (such as Group Me, Zoom, discussion boards, text, in-person, TA office hours, etc.) during pre-lab quizzes is prohibited.

Using online resources such as Course Hero or Chegg to gain answers to any graded assignment (including homework, labs, pre-lab quizzes and exams) is *not* allowed. Posting course materials to web sites is a violation of copyright laws and is *not* allowed. The CHM 11600 instructor can obtain user information from Chegg and other sites when inappropriate course material is posted. This information will be investigated.

Consequences of academic dishonesty include receiving a lower or failing grade for an assignment, being required to repeat the assignment, receiving a lower or failing grade for the course and/or dismissal from the University. Incidents of academic integrity are referred to The Office of the Dean of Students. A student accused of academic dishonesty will be afforded due process as defined by Purdue University procedures.

This Course Packet is a contract between CHM 11600 students and the instructor. 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.

Some examples of academic dishonesty are listed below. While this is not a complete list of examples of academic dishonesty, these examples are provided for your information. If you have any questions at all about permissible behavior, you should ask before acting.

- Copying or possessing an unauthorized crib or unauthorized information (written or electronic) during an exam.
- Copying from another student's exam or work; allowing another student to copy your exam or work.
- Copying lab data or a lab report; giving your data or lab report to someone else to copy. This includes files on computer disks as well as paper copies.
- Changing data for a lab project to fit the perceived answer; that is, what you think the answer should be.
- Using someone else's data in a lab report as if it were your own.
- Submitting a lab report or other work that you did not do.

Reading Assignments and Learning Objectives

Weekly reading assignments will be posted on Brightspace. Reviewing the assigned material prior to lecture and laboratory is recommended. Some of the material will be covered in lecture and some on your own.

Learning Objectives list the concepts you are expected to understand and the skills (calculations) you are expected to demonstrate for each topic covered in the course. They are posted in the ***Learning Objectives*** module on Brightspace. Exam questions will be based on the Learning Objectives.

Lectures

Lecture attendance is essential to learning the material presented. However, do not come to lecture if you are sick, have COVID-19 symptoms, or are directed to isolate or quarantine. If you must miss lecture, then you may view the lecture on Boilercast. Access instructions are provided in the **Lectures** module on Brightspace.

Lecture attendance will be assessed by answering iClicker questions during lecture. Credit (2 pts.) will be recorded in 18 unannounced, randomly-selected lectures during the semester. The best 15 of 18 lecture attendance scores will count into your grade. *In addition, one additional point of extra credit per randomly-selected lecture will be awarded for answering the iClicker question **correctly**.* You must be present in WTHR 200 for your participation to register. Instructions for creating an iClicker account are on Brightspace in the **Lectures** module. The iClicker app is free for students - Purdue has a site license. You may not use an iClicker remote.

Student versions of lecture slides will be posted on Brightspace. Note that these will be outlines of the lectures and are not a substitute for taking notes during lectures.

Recordings and screen captures of lectures may be viewed or downloaded by using the Boilercast link in Brightspace.

Cell phones, computers, or other electronic devices *not being used for instruction purposes* are distracting for everyone in a learning situation. Computers can be used to take notes and follow lectures, but please respect your classmates by not using social media, texting, searching the internet, watching Netflix, etc. during class.

Talking aloud to classmates during lecture is distracting to other students and is disrespectful to the lecturer. If you have a question, please ask, but otherwise remain quiet and allow the students around you the opportunity to pay attention.

If you have questions, please attend TA or instructor office hours (see the **Resources** module on Brightspace for schedules).

Recitation

Weekly recitation provides the opportunity for you to ask questions and work problems with your fellow students and TA. Your questions are always the first agenda item, so come prepared.

Attendance at recitation is required. However, do not come to recitation if you are sick, have COVID-19 symptoms, or are directed to isolate or quarantine. If you have an *excused absence*, follow the instructions listed in the **Absences** module of Brightspace to request a make-up assignment for recitation credit.

Recitation participation is worth two (2) points per week. The two lowest recitation attendance scores will be dropped at the end of the semester. Recitation attendance will not be recorded in Weeks 1, 8 (Octoberbreak) and 15 (Thanksgiving Break). Thus, the maximum number of points you can earn for recitation attendance is 22 (i.e., best 11 of 13 scores).

Take your textbook, lab materials, homework, calculator, and/or any questions that you have regarding

the course to recitation.

Copies of the recitation worksheets and slides will be posted on Brightspace. You do not need to work on the problems prior to recitation. The worksheet is for practice and will not be collected or graded. The recitation worksheet answers will be posted on Wednesdays, after all recitation sections have met.

Note that it is not your TA's responsibility to *provide you with answers* to homework, pre-lab, or lab report questions. Rather, they are expected to *guide you* to the correct solutions, help you identify mistakes, and add details to help you further understand concepts.

Homework (Achieve)

You will have a weekly homework assignment on the Achieve platform. **Unless otherwise stated, each homework assignment will be posted on Friday and will be due on the second Tuesday (at 11:59 pm) after it is posted (i.e., about ten (10) days after it is assigned).** All links and due dates will be in the *Homework* module on Brightspace.

You will have five (5) attempts for each question in an assignment. There is no penalty for failed attempts.

There will be fourteen (14) graded homework assignments in this course. Each homework assignment will be scaled to 10 points, for a total of 140 points. The one lowest homework score will be dropped at the end of the semester.

No time extensions are possible for any homework assignments, except for excused absences. Allow plenty of time to do your homework and get the highest possible score. If you wait until the last minute, you risk the possibility of technical difficulties, illness, or other situations interfering with your success. If you have an excused absence, then follow the instructions listed in the *Absences* module on Brightspace to request a deadline extension.

Exams are likely to include questions taken from homework assignments. Copies of all homework assignments with unlimited attempts will be available after the due dates for study purposes.

Homework grades do not synchronize instantaneously with Brightspace. Also, do not be concerned if your grade updates before you finish the assignment. Please be patient.

If you have difficulties accessing Achieve, then try the following: (1) only access Achieve through Brightspace; (2) use the Chrome web browser; (3) allow pop-ups in the web browser.

Macmillan Customer Service can be reached at 1-800-936-6899 or <https://mhe.my.site.com/macmillanlearning/s/chat-with-us>.

Exams

Exams are a chance for you to demonstrate your understanding by answering conceptual questions and to demonstrate your skills by answering calculation questions. We aim for exams to be about half conceptual questions and about half calculation questions. Exams are worth approximately 60% of your final grade. All exam questions relate to one or more of the Learning Objectives posted on Brightspace, as well as labs and other course materials. There will be three (one-hour) exams and a *comprehensive*

final exam in this course.

The three (one-hour) exams:

- will be administered in the evenings, on the dates listed below,
- will be on paper with scantron answer forms,
- are worth 150 points each,
- will consist of multiple-choice questions,
- have a 60-minute time limit (unless you have extended time through the DRC).

Exam I: 150 points; Wednesday, Sept. 18; 8:00 pm - 9:00 pm; BHEE 129, WALC 1055, ME 1130

Exam II: 150 points; Wednesday, Oct. 16; 8:00 pm - 9:00 pm; BHEE 129, WALC 1055, ME 1130

Exam III: 150 points; Thursday, Nov. 14; 6:30 pm - 7:30 pm; PHYS 114, UC 114, FRNY G140, ME 1130

Final Exam: 300 points; to be announced - during finals week

If you have a conflict with another course (either a class or an exam), you must contact the Supervisor TA or the General Chemistry Office (BRWN 1144) at least one calendar week before the exam date to discuss your options. You may be asked to provide written verification of the conflict.

Useful information (formulas, conversion factors, Periodic Table, etc.) to be provided with each exam will be posted in advance on Brightspace.

You will have an assigned seat for each exam. Your seat assignment will be posted on Brightspace prior to each exam.

You should plan to arrive at least 15 minutes before the exam start time. You will also need to bring a simple, scientific calculator, several sharpened #2 pencils, and your student ID with you to each exam. There will be no “spare” calculators available during exams, and you may not share a calculator with another student. Calculators that can graph or solve or store equations are not allowed. See Brightspace (***Exam Information*** module) for additional details.

You will not be allowed to leave the examination area during the first 15 minutes of the scheduled exam time. You may arrive late for the exam during this first 15-minute window; however, you will not receive additional time to complete the exam. After the first 15 minutes, no one will be allowed to enter the examination area or take the exam.

After all eligible students have taken each exam, we will post the key on Brightspace. It is important that you review your mistakes and correct misconceptions because chemistry is cumulative, and topics build on previous topics. You may ask questions about exam content in recitation or TA office hours. If you would like to review your exam with your instructor, you must fill out the “Exam Debrief” form posted on Brightspace in the ***Exam Information*** module and e-mail it to the instructor before scheduling a meeting.

Your lowest exam score or ½ of your final exam score will be dropped at the end of the semester.

If you have an excused absence and miss an exam, then e-mail the Supervisor TA as quickly as possible to arrange a make-up exam. No make-up exams are possible for *unexcused* absences.

Final Exam

The final exam is comprehensive and is worth 280 points. The date, time, and format of the final exam will be communicated to you during the semester.

Wait until you know the date of the final exam before you make travel plans that might conflict with the exam. ***Final exams will NOT be rescheduled to accommodate your travel plans.***

University policy on final exams states: “*Students scheduled for **more than two** (final) examinations in one calendar day are entitled to reschedule any examination in excess of two... It is the responsibility of the student to make necessary arrangements **before the last week of regularly scheduled classes.***”

Determining Your Course Grade

Each of the assigned course activities for CHM 11600 is worth the number of points listed below. Before final course grades are assigned at the end of the semester, the following scores will be dropped:

- your *one* lowest homework score
- your *three* lowest lecture participation scores
- your *two* lowest recitation participation scores
- your *one* lowest pre-lab quiz score
- your *one* lowest lab report score
- your *one* lowest exam score or ½ your final exam score

Homework	130 pts.	(best 13 of 14 at 10 pts. each)
Lecture Participation	30 pts.	(best 15 of 18 randomly selected lectures at 2 pts. each)
Recitation Participation	22 pts.	(best 11 of 13 at 2 pts. each)
Lab Check-in Activity	5 pts.	
Pre-Lab Quizzes	50 pts.	(best 10 of 11 at 5 pts. each)
Lab Reports	200 pts.	(best 10 of 11 at 20 pts. each)
One-Hour Exams	450 pts.	(3 at 150 pts. each)
Final Exam	300 pts.	(comprehensive)
Sub-total	1187 pts.	
	-150 pts.	drop lowest exam or ½ final exam score, whichever is lower
Total	1037 pts.	

The total points available for exams is 600. Your exam total will be determined as follows: your points earned on the Final Exam will be divided in half and considered as separate scores, T4 and T5. For example, if you score 170/300 on the final exam, then your scores for T4 and T5 would each be 85/150. These scores will be compared with your scores on Exams 1 - 3 (T1, T2, T3) and the lowest of these scores will be dropped (i.e., not counted into your total points earned). The remaining four scores will

comprise your exam total points.

Minimum Lab Completion. You are required to complete 9 of the 11 lab experiments and reports. If you complete 8 of the 11 lab experiments and reports, then your final letter grade will be reduced by one full letter grade. If you complete 7 or fewer of the 11 lab experiments and reports, then you will receive a failing grade for the course. Note that attending lab but not completing the report is considered as a failure to complete the lab.

At the end of the semester, the total scores for all students will be arranged in numerical order, the score that corresponds to either the 99th or 98th percentile (S_{99} or S_{98}) will be determined, and then letter grades will be assigned based on this percentile score as follows:

- A: Total Score $\geq 0.93 \times S_{99}$ (or S_{98})
- A-: $0.90 \times S_{99}$ (or S_{98}) \leq Total Score $< 0.93 \times S_{99}$ (or S_{98})
- B+: $0.86 \times S_{99}$ (or S_{98}) \leq Total Score $< 0.90 \times S_{99}$ (or S_{98})
- B: $0.83 \times S_{99}$ (or S_{98}) \leq Total Score $< 0.86 \times S_{99}$ (or S_{98})
- B-: $0.80 \times S_{99}$ (or S_{98}) \leq Total Score $< 0.83 \times S_{99}$ (or S_{98})
- C+: $0.76 \times S_{99}$ (or S_{98}) \leq Total Score $< 0.80 \times S_{99}$ (or S_{98})
- C: $0.73 \times S_{99}$ (or S_{98}) \leq Total Score $< 0.76 \times S_{99}$ (or S_{98})
- C-: $0.70 \times S_{99}$ (or S_{98}) \leq Total Score $< 0.73 \times S_{99}$ (or S_{98})
- D+: $0.66 \times S_{99}$ (or S_{98}) \leq Total Score $< 0.70 \times S_{99}$ (or S_{98})
- D: $0.63 \times S_{99}$ (or S_{98}) \leq Total Score $< 0.66 \times S_{99}$ (or S_{98})
- D-: $0.60 \times S_{99}$ (or S_{98}) \leq Total Score $< 0.63 \times S_{99}$ (or S_{98})
- F: Total Score $< 0.60 \times S_{99}$ (or S_{98})

This system has several advantages because:

- unlike a *curved scale*, it encourages cooperation among students because NO student is penalized when another is successful, and
- unlike an *absolute scale*, it tends to neutralize the effects of differences from one semester to another and thereby ensures that the same criteria are used to assign grades from one semester to another.

This approach to grading means that the grade you earn in this course depends primarily on *your own* effort and performance. *It also ensures that all students who do well in the course will get good grades.*

Periodically during the semester, your total points will be calculated and tentative grade cutoffs will be posted so that you can see how well you are doing in the course.

You must check all of your grades on Brightspace regularly. If there are errors or discrepancies, notify the Supervisor TA *within two weeks of a tentative grade cutoff update being announced*. Grade issues that are brought forward after this deadline may not be considered, depending on the timing and situation.

Saving Graded Materials

You should save all of your graded materials until after you have received your final letter grade for the course. In order to resolve any discrepancies, your graded materials may need to be reviewed.

SOURCES OF HELP

TA Office Hours

Chemistry 11600 TAs will hold office hours each week (schedule posted on Brightspace in the *Resources* module) where any Chemistry 11600 student can go to get help with chemistry at no charge. You should feel free to see any of the TAs, not just your own! Feel free to go to the office hours with a classmate or small group if you feel uncomfortable going alone.

Supervisor TAs / Professor

The Supervisor TAs and Dr. Nash will also hold office hours each week. The schedule for office hours will be posted on Brightspace in the *Resources* module.

Supplemental Instruction (SI) (<https://www.purdue.edu/SI>)

There are Supplemental Instruction (SI) study sessions available for this course. These 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. Attendance at these sessions is voluntary, but extremely beneficial for those who attend regularly. Students who attend these interactive sessions will find themselves working with peers as they compare notes, demonstrate and discuss pertinent problems and concepts, and share study and test-taking strategies. Students are asked to arrive with their student ID card, lecture notes and questions to these informal, peer-led study sessions. Please visit [Brightspace](#) to access information about connecting with SI sessions and SI Leader office hours.

Resource Room

The staff in this area can answer many of your chemistry-related questions but going to a Chemistry 11600 TA with your chemistry questions is recommended. The Chemistry Resource Room is also an area where you can study alone or with others. Days and times when the Chemistry Resource Room is scheduled to be open will be posted outside WTHR 117.

College of Science Instructional Nightly Enrichment ([COSINE](#))

Free tutoring program. Visit the web site for days, times, and locations.

[Academic Success Center](#)

Private Tutors

A list of private tutors (and their hourly rates) will be posted on Brightspace in the *Resources* module.

LABORATORY PROJECTS

Laboratory projects are an integral part of CHM 11600 and are an opportunity for you to experience the chemical concepts discussed in lecture in a practical way. You will access digital lab materials (instructions/manual) via the Labflow program. You will take pre-lab quizzes on Labflow. Instructions for Labflow purchase and registration are in the **Labs** module on Brightspace.

You will be working in teams of two (pairs) for most of the lab experiments. No students will be allowed to work individually in lab. While we encourage you to discuss concepts with other members of your class, each lab report must represent the **unique effort of each individual student**.

Minimum Lab Completion. You are required to complete 9 of the 11 lab experiments and reports. If you complete 8 of the 11 lab experiments and reports, then your final letter grade will be reduced by one full letter grade. If you complete 7 or fewer of the 11 lab experiments and reports, then you will receive a failing grade for the course. Note that attending lab but not completing the report is considered as a failure to complete the lab.

Timeliness and Appropriate Dress. At the beginning of each lab period, your TA will give a pre-lab lecture in which safety issues related to the experiment will be discussed. ***For your safety, as well as the safety of others, if you are more than 10 minutes late for lab, or if you arrive on time but inappropriately dressed, you will not be allowed to perform the experiment or remain in the lab and you will receive a grade of zero for the experiment. Either of these situations will result in a failure to complete the lab project.***

Laboratory Attendance and Participation

Lab attendance is required since CHM 11600 is a laboratory course. Students with *excused* absences are eligible to complete lab make-up assignments. Students with *unexcused* absences are eligible for **one lab make-up assignment, per student, per semester**, provided the student applies for a make-up assignment **before** the lab start time. Refer to the instructions listed in the **Absences** module of Brightspace to request a lab make-up assignment. Students can complete no more than three lab make-up assignments per semester for excused absences or disability accommodations. To account for *all other absences* (i.e., unexcused), the one lowest lab score is automatically dropped at the end of the semester.

For cases such as those listed below, a score of zero (failure to complete) will be assigned:

- being absent for any reason (except excused grief, jury duty, medical, or military absences or NCAA travel or approved professional development)
- being dismissed from lab for an incomplete Safety Certification (score < 20/25)
- being dismissed from lab for safety violations, including dress and goggle violations (*if you go home to change clothes, you must be back within the first 10 minutes of the lab period; if someone brings you clothes, it must be within the first 10 minutes of the lab period*)
- arriving more than ten (10) minutes after the lab start time (including if you go home to change clothes)
- leaving lab early or otherwise not completing the lab project
- inadequate preparation that hinders lab participation
- not contributing constructively to the group's work in lab, including leaving the laboratory for longer-than-necessary periods of time/personal breaks
- not recording appropriate data and/or observations during lab
- failure to submit a lab report, even if you attended the lab

Pre-Lab Quizzes

The purpose of the pre-lab quizzes in Labflow is to ensure that you have adequately prepared for the lab by reviewing the concepts and procedure.

- For the best chance of success, take the pre-lab quiz *after* reading the lab materials on Labflow.
- Pre-lab quizzes are *individual* assignments. Collaboration with other students or assistance from TAs *during the quiz* is not allowed. (However, you are allowed to access the lab materials.)
- Pre-lab quizzes are due each week in which lab meets on Tuesday by 11:59 pm.
- If you do not attempt the quiz before the deadline, then you will receive a zero for the quiz (out of 5 points). You ARE, however, allowed to attend lab and can still earn points for the lab report (20 points).
- There are no make-up quizzes or time extensions except for *excused* absences or approved accommodations. The lowest pre-lab quiz score is dropped at the end of the semester to account for illnesses, technical difficulties, and other absences that are not excused.

Laboratory Procedure

For each lab, you must upload a brief procedure to Labflow by Tuesday at 11:59 pm. Your procedure can be a list of steps, a flowchart, or an outline. Your procedure is meant to show that you read and understand what you will be doing in lab. Example procedures will be provided on Brightspace.

Laboratory Reports

For each lab, you are eligible to earn 2 points for attendance. To earn these points, you must remain in lab until you have completed (submitted) your report, or until the end of the lab period, whichever comes first. If you leave the lab before your report is completed (submitted), or before the end of the lab period, you will get a zero for attendance (i.e., 0/2 pts.)

For each lab project, you will complete an *individual* lab report in Labflow. You have two attempts for each lab report. To access your second attempt, click “Attempt Activity Again” at the bottom of the screen. All submissions will be analyzed by the Turnitin plagiarism checker. If your similarity score for any answer(s) is/are too high, then rewrite and resubmit.

You are encouraged to access lab materials and notes while completing the reports. Also, you may discuss your report with peers and your TA; however, ***you must do your own work*** (i.e., you should not copy or submit another student’s answers).

In lab reports, you must cite any sources (including the lab manual) used for your answers. Copying text word-for-word from the lab manual/instructions or any other source is prohibited and will receive no credit. The use of ChatGPT or other AI agents is not banned in the class; however, it should not take the place of your own writing, and you need to ensure that you also confirm facts that are generated because these tools do not check the accuracy of your claims. If you use an AI agent, you must specify the AI agent used, the time and date used, the prompts used to generate text, the sections containing AI-generated text, and the ideas resulting from AI use.

Lab reports are due by 11:59 pm on the day you have lab (Wednesdays). Check all of your work carefully before the deadline to make sure that you answered all of the questions. Late lab reports are not accepted.

Be sure to complete the lab report appropriately:

- **all text in your report, except for calculations, must be typed, not handwritten**
- answer in full sentences for open-ended questions; answer all parts of the questions
- each student must prepare individual graphs and tables, *not* take screenshots or photograph other students' work; label graphs and tables clearly
- show calculation steps clearly for mathematical questions; make sure your handwriting is clear and legible - if your TA cannot read your work, then they cannot grade it
- show the use of correct units and significant figures for your measurements and calculation results
- ensure results and conclusions are consistent with *your* data and observations
- answer questions by using your own words; that is, using distinct language
- cite the lab manual if you are quoting directly from it or put information from the lab manual into your own words
- using ChatGPT, Bard, and other AI-based platforms to generate answers is not allowed and violates academic integrity policies

Laboratory Grades

Graded lab reports will be available for viewing approximately one week after submission. You are encouraged to review the graded work as your TA may have left useful feedback for your future improvement. If you have questions about a lab grade, speak with your TA or the Supervisor TA *within one week* of the graded report being made available to you. After one week, grade adjustments or changes may not be possible.

To have a lab report regraded, after you have already discussed the issue with your TA, and it is still unresolved:

- send a detailed and specific explanation of why you are requesting a regrade via e-mail to the Supervisor TA; refer to the specific question(s) with which you have an issue; "I deserve more points" alone is not an acceptable explanation
- the Supervisor TA will conduct the regrade based on the original rubric; in some cases, your TA will be consulted
- if a grade is changed, we will update the score in Labflow and/or Brightspace
- the whole lab report will be regraded, and it is possible to get a lower score upon regrading

Make sure you review lab content because exams will include lab-related questions.

Laboratory Equipment

You will share an assigned laboratory drawer of equipment with the student(s) at your lab table. Your lab partner(s) will depend upon your commitment to keeping the equipment clean and in good working condition.

You and your lab partner(s) will have the opportunity to assess the equipment during check-in. It is important that you inspect all pieces of equipment carefully. Any equipment that is unusable (i.e., dirty, chipped, cracked, stained, broken, etc.) is replaced free during check-in.

After Check-In Day

It is important that you do your part to maintain the drawer throughout the semester by cleaning all the glassware after use by (1) washing with hot water, soap, and a brush, (2) rinsing with tap water, (3) and then rinsing with deionized water. By using this three-step process for cleaning

glassware, you will have better experimental results. Make sure to return clean glassware to your drawer.

If you are responsible for a piece of equipment becoming unusable (i.e., the piece becomes chipped, cracked, stained, broken, etc.), then you must go to the storeroom (immediately) and purchase a replacement.

Should you discover that a piece of equipment is missing, first check with the other students at your lab table and in the lost and found box in the lab. If the piece is still missing, then your group must replace it immediately. The storeroom staff can split the cost of a replacement among all or any number of lab partners.

Often, pieces of equipment are broken accidentally; for example, a thermometer rolls off the table and breaks. Replacing the thermometer is still the responsibility of the group and the storeroom staff can split the cost of a replacement among the lab partners.

Changing Lab Sections / Dropping the Course / Withdrawing from the University

If you change sections, drop the course, or withdraw from the University, then it is your responsibility to check out of your assigned drawer during your scheduled lab period. Contact your TA and/or the storeroom on the 1st or 4th floor of CHAS for instructions. **Failure to check out of lab will result in a \$45 fee**, and forfeiture of the right to determine the acceptability of all drawer equipment; that is, you will be charged for all equipment that is unacceptable (e.g., dirty, broken, chipped, missing, etc.).

- **You must check out of your lab drawer during your scheduled lab period. Contact the Supervisor TA if you need to make alternate arrangements to check out.**
- Inform the storeroom staff immediately if you are changing lab sections, dropping the course, or withdrawing from the University. Check out involves a process where you and your TA or other staff member inspect the items in your lab drawer before you are released from your responsibility for the items in the drawer.
- If you **change sections**, then you are still required to properly check out of your current lab drawer before checking in to another section.
- If you **drop, or withdraw** from, the course before the end of the semester, then you are still required to properly check out of your lab drawer.
- If you have any questions about properly checking out of your lab drawer, go to the storeroom, CHAS 1041 or CHAS 4039, for assistance.

Check-out Day

On the last day of lab, you and your lab partners will check out of your lab drawer. You must arrive on time, be properly dressed and wear goggles. If you arrive more than 15 minutes late, you will be asked to leave the lab and will be assessed a fee of \$45, plus the cost of replacing any equipment that is broken, missing or dirty.

You and your lab partners will clean and inventory the drawer for your TA's inspection. All missing or unusable equipment must be replaced at that time.

If you do not attend lab check-out, then you will be assessed a fee of \$45, plus the cost of replacing any equipment that is broken, missing or dirty.

TEACHING LABORATORY SAFETY POLICIES

*Students' safety in the laboratory is a priority and everyone is required to comply with the following safety regulations. Failure to comply will result in being sent home from lab **with a score of zero**, which counts as a lab absence. **It is your responsibility to know the policies. You may or may not receive a warning before being dismissed from lab for safety violations.***

All students must complete the online safety certification found on [Brightspace](#) with a score of 20/25 or better by 11:59 pm on Monday, August 26. You must confirm your score in the Brightspace grade book. If you miss lab check-in, or score less than 20/25, then you must make alternate arrangements to complete the safety certification before you will be allowed to work in the lab. *Note that you will be sent home and will receive a zero for each lab you miss due to an incomplete safety certification.*

Safety (Splash) Goggles

Approved safety (splash) goggles must be worn at all times in the laboratory (including during check-in, clean up, report writing, and the day of check-out). If you are in lab and your goggles are not covering your eyes, then you will be sent home and will receive a zero for the lab and the lab report (failure to complete). When lab is over and you remove your goggles, you must walk out of the lab *immediately*. In other words, you must put everything away, pack up, and chat with classmates *before* removing your goggles.

Appropriate Clothing

Proper dress (clothing and shoes) is required. *Each student must wear clothing in the laboratory that covers, and protects, the skin from the neck (including the shoulders) to the ankles, feet, and toes when sitting, standing or reaching. Your TA or Supervisor TA might ask you to raise your arms or bend your knees to check if you are violating proper dress. If you attend lab in unacceptable attire, you will be sent home and will receive a zero for the lab (failure to complete). Unacceptable clothing includes, but is not limited to:*

- tops that are sleeveless, low-cut or V-neck or scoop neck (below the collar bone), bare midriff or crop-tops, or tank-style
- loose-knit sweaters that expose your skin due to holes or baggy style
- pants that are ripped or have **holes** in the fabric of *any* size
- tights or thin (translucent or transparent) **leggings** or those that have holes or mesh inserts
- Capri or cropped pants
- skinny or ankle pants that reveal skin between the shoe and the bottom of the pant leg (wear boot or long socks if your ankle shows)
- shorts
- short skirts (i.e., shorter than floor-length)
- open-toed and/or open-heeled shoes (including Crocs, Birkenstocks or other clogs)
- sandals (with *or* without socks)
- boat shoes, ballet flats, slippers, moccasins, or any shoe that doesn't cover the **entire** top of your foot and ankle, with *or* without socks

Your best option for chemistry lab attire is a crew neck t-shirt, jeans without holes, and sneakers with socks that cover your ankles.

Proper Lab Attire



Gloves

Gloves serve two purposes; they protect your skin from potential contaminants and keep any potential contaminants inside the lab. You should wear protective gloves when directed to do so. When you leave the lab, take the gloves off and throw them away. Get new gloves when you return to lab.

Contact Lenses / Hair

Wearing contact lenses in the laboratory is not a wise idea; you are encouraged to wear glasses instead. If you wear contact lenses in the laboratory, you must inform your TA of this at the beginning of the semester. If your hair is longer than shoulder length, then you must tie it behind your head in order to avoid contact with chemicals that might be on the lab bench. Rubber bands are available in the laboratory.

Food & Beverages

Food and beverages are no allowed in the laboratory. ***This includes water bottles.***

Hazardous Materials / Disposal of Waste

Follow your TA's guidance on appropriate handling of hazardous materials and disposal of chemical waste. Promptly clean up spills, and the laboratory, before leaving.

HOW TO STUDY FOR CHEMISTRY 11600

It will take you at least two hours on your own for every hour we spend in class in order to study and learn the material. This means you will spend about 8-12 hours of distraction-free studying and working with chemistry each week. You may spend this time reviewing and annotating your lecture notes, reading the text, doing homework, working practice problems, studying for exams, or other things. You may find yourself spending *more than* 8-12 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 perform well.

Before Lecture

- Review your notes from the previous lecture.
- Review the assigned reading and read the sample problems within the assigned section(s) of the textbook.

Use the textbook in ways that work best for you.

- Use the textbook as a reference when you study your lecture notes. Fill in any gaps and correct any information.
- Processing technical information will be more effective in the absence of Netflix, TVs, radios, earbuds, etc. Turn your phone on silent and set it aside/across the room.
- With technical material, the subheadings often carry important information. This is different from the chapter headings in a novel that usually contain no information.
- Read technical material (like your chemistry textbook) differently than you would read a novel. Read in short “chunks” and give yourself time to reflect and interpret the information presented. With technical material, it is often difficult to pick up the “story” in the second paragraph if you did not process the first paragraph.
- Try the problems in the textbook *without* looking at the solutions! If you have understood what you have read, then you should be able to do the problems. First, cover the solution and try the problem. Second, quickly look at the answer to see if you are correct. If your answer is incorrect, try re-reading the section to see if you missed anything. Third, look at your work again to find your mistake. Fourth, look at the solution of the problem presented in the textbook. **The key is to force yourself to recall and apply material.**

During Lecture

- Take notes!
- Write down each step of every problem or example even if you do not understand the step. You can always ask about it later.
- Try to answer all the questions and work all the problems that the Instructor presents.
- 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.
- Periodically note the time in the margin of your notes so that you can quickly find a certain section of the lecture when you review the lecture recording.
- Turn off distractions (e.g., Netflix, homework, social media, ,etc.)

After Lecture

- Review your notes while things are still fresh in your mind.
- Listen to the lecture recording to fill in things that you missed.

- Attend TA office hours or e-mail your TA (allow 24 hours for a response) to ask questions and get help.
- Never miss lecture. Chemistry is cumulative. What is presented tomorrow depends upon your knowledge of what was covered today. If you miss class, then get a friend to take notes for you or take notes from the recording.

When Should I Do the Homework?

- 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 5-10 minutes, then go on to another problem. After a day or so, work related problems in the textbook.
- Review your class notes and the assigned section(s) in the textbook *before* you attempt any of your homework problems.
- Seek help from a TA during recitation, office hours or via e-mail (allow 24 hours for a response).

Practice, Practice, Practice!

- Read the Sample Problems in the textbook, than work one or both Follow-Up Problems and check your work at the end of the chapter.
- Work additional problems at the end of each textbook chapter. You can check answers for the problems with colored numbers in Appendix E.
- Look for similarities and differences in problems (e.g., homework questions, lecture examples). Classify problems by the type of knowledge that is needed to solve the problem.

EMERGENCY PREPAREDNESS

Emergency preparedness is your personal responsibility. Purdue University is actively preparing for natural disasters or human-caused incidents with the ultimate goal of maintaining a safe and secure campus.

- For any emergency, call 911.
- There are nearly 300 Emergency Telephone Systems throughout campus that connect directly to the [Purdue University Police Department](#) (PUPD). If you feel threatened or need help, push the button and you will be connected to the PUPD.
- If we hear a fire alarm, we will immediately evacuate the building. During lecture, we will proceed to the area in front of Stanley Coulter Hall (SC). During lab, we will proceed to the area between Hovde Hall (HOVD) and Elliott Hall of Music (ELLT) (basement labs) or the north entrance to the Armory (AR). **Do not use the elevator!**
- If we are notified of a Shelter in Place requirement for a tornado *warning*, we will shelter in the lowest level of this building away from windows and doors. Our preferred location is the *basement* of WTHR or BRWN (lecture, recitation) or CHAS (lab).
- If we are notified of a Shelter in Place requirement for a hazardous materials release, we will shelter in our classroom shutting any open doors and windows.
- If we are notified of a Shelter in Place requirement for an active threat such as a shooting, we will shelter in a room that is securable preferably without windows. During lecture, we will shelter in WTHR 200. During lab, we will shelter in the lab.

“**Shelter in Place**” means seeking immediate shelter inside a building or university residence. 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 e-mail announcement.

In the case of a major campus emergency involving a Shelter in Place, **all** laboratory experiments will be halted while students shelter in lab. Students’ lab grades will **not** be penalized in this situation.

