PURDUE UNIVERSITY | Chemistry COLLEGE OF SCIENCE

CHEMISTRY 12600: Introduction to Chemistry II

Spring 2024

Course Information:

- Students are expected to attend all scheduled lectures, one recitation, and one laboratory each week:
    - Lecture meets MWF, 8:30-9:20 a.m. in WTHR 172
    - Laboratory meets on Thursdays (cf. section schedule below)
    - Recitation meets on Tuesdays. (cf. section schedule below)
    - Section schedule (combinations indicated by color):

CRN	Sec	Type	Cred	Cap	Act	Rem	Days	Time	Dates	Location	Instructor
This combination...											
27306	101	LAB	0	24	19	5	R	11:30-2:20pm	Jan08-Apr27	CHAS B005	TBA
14072	SC1	LEC	5	120	94	26	MWF	8:30-9:20am	Jan08-Apr27	WTHR 172	Starr, HE
14074	201	REC	0	24	19	5	T	12:30-1:20pm	Jan08-Apr27	WTHR 360	TBA

You may also choose one of the other Laboratory sections:

Laboratory CHM 12600 - 102 (CRN 27307)

This combination...											
27307	102	LAB	0	24	18	6	R	11:30-2:20pm	Jan08-Apr27	CHAS B011	TBA
14072	SC1	LEC	5	120	94	26	MWF	8:30-9:20am	Jan08-Apr27	WTHR 172	Starr, HE
14075	202	REC	0	24	18	6	T	2:30-3:20pm	Jan08-Apr27	WTHR 360	TBA

Laboratory CHM 12600 - 103 (CRN 27308)

This combination...											
27308	103	LAB	0	24	17	7	R	7:30-10:20am	Jan08-Apr27	CHAS B005	TBA
14072	SC1	LEC	5	120	94	26	MWF	8:30-9:20am	Jan08-Apr27	WTHR 172	Starr, HE
14073	203	REC	0	24	17	7	T	10:30-11:20am	Jan08-Apr27	WTHR 360	TBA

Laboratory CHM 12600 - 104 (CRN 27309)

This combination...											
27309	104	LAB	0	24	19	5	R	3:00-5:50pm	Jan08-Apr27	CHAS B011	TBA
14072	SC1	LEC	5	120	94	26	MWF	8:30-9:20am	Jan08-Apr27	WTHR 172	Starr, HE
18315	204	REC	0	24	19	5	T	1:30-2:20pm	Jan08-Apr27	WTHR 360	TBA

Laboratory CHM 12600 - 105 (CRN 27310)

This combination...											
27310	105	LAB	0	24	21	3	R	3:00-5:50pm	Jan08-Apr27	CHAS B005	TBA
14072	SC1	LEC	5	120	94	26	MWF	8:30-9:20am	Jan08-Apr27	WTHR 172	Starr, HE
27304	205	REC	0	24	21	3	T	3:30-4:20pm	Jan08-Apr27	WTHR 360	TBA

Instructor:

Dr. Hannah Starr
Office: WTHR 157
Email: starrh@purdue.edu
Office Hours (in WTHR 151): Mondays 10:30 – 11:20 a.m. & Wednesdays 9:30 – 10:20 a.m.

Teaching Assistants:		**Office Hours**
Aaron Mena (Head TA)	mena1@purdue.edu	N/A

Ellis Lin	lin1204@purdue.edu	Wednesdays at 10:30am
Matthew Locklear	mlocklea@purdue.edu	Tuesdays at 12:00pm
Joseph Palazzo	jepalazz@purdue.edu	Wednesdays at 1:30pm
Caroline Zu	czu@purdue.edu	Fridays at 9:30am
Eli Zuercher	eczuerch@purdue.edu	Fridays at 12:30pm

Course Catalog Description:

CHM 12600 - Introduction to Chemistry II Credit Hours: 5.00. A continuation of CHM 12500. Properties of solutions; chemical equilibrium calculations; elementary thermodynamics; oxidation-reduction reactions and electrochemical cells; rates of reaction; qualitative analysis; descriptive chemistry. Typically offered Spring.

Prerequisites

Undergraduate level CHM 12500 Minimum Grade of D; or Undergraduate level CHM 13500 Minimum Grade of D; or Undergraduate level CHM 11500 Minimum Grade of D; or (Undergraduate level CHEM C1050 Minimum Grade of D and Undergraduate level CHEM C1250 Minimum Grade of D)

Required Course Materials

- *Interactive General Chemistry 2.0, Atoms First*, by Macmillan Learning. This text is the same as used in CHM 12500.
- You are required to complete homework assignments online using the Achieve system by MacMillan.
    - Purchase Options:
        - Single Term Access – Digital Only
        - Single Term Access – Digital with Loose Leaf Textbook
        - Two Term Access – If you purchased a two-term access option for CHM 12500 your access will work for CHM 12600

CHEM 12500/12600 Achieve Purchase instructions:

1. Go to purdue.brightspace.com and login with your Purdue credentials
2. Select our course: Spring 2024 CHM 12600-SC1 LEC
3. Select: Content/Achieve Homework and Extra Credit/Macmillan Course Tools Launch and follow the instructions thereafter to gain access to Achieve and the E-Book. ***Be sure to register for Achieve using your Purdue e-mail address!***

If you purchased two-term access in the fall and want to apply your remaining access to your spring course:

● Click the Achieve link in Brightspace. You will see a prompt asking if you'd like to apply your remaining access to the new term's course. Check the box and click "Apply Remaining Achieve Access."

If you want to purchase one-term access:

● Click the Achieve link in Brightspace. You will be prompted with three options. Select the "Purchase Access" button and follow the steps to check out from the student store. ***You must use the same email you use within Brightspace on the Student Store.***

If you purchased an access code from the bookstore:

● Click the Achieve link in Brightspace. You will be prompted with three options. In the box below the ALREADY HAVE A CODE? option, type your bookstore code exactly as it appears on your access card. You will be granted full access to the course.

If you want to start a grace period (free two weeks of access to the course):

● Click the Achieve link in Brightspace. You will be prompted with three options. Select "Start a Grace Period," check the acknowledgement box, and create an Achieve account in the student store. You will see a yellow banner at the top of your course that will count down the days remaining in your grace period.

******You must use the same email you use within Brightspace on the Student Store.******

If you have any difficulty registering, please contact Macmillan Support here.

- Scientific Calculator. A simple, battery-operated scientific calculator with exponential, logarithm and square root functions is acceptable.
- Approved safety goggles. Safety goggles must be worn at all times in the laboratory. Safety goggles can be purchased in the bookstores or at the chemistry storeroom.
- Digital Materials Charge: Students enrolled in this course must purchase digital materials for lab ($35). The materials will be released online on a real-time (approximately weekly) basis during the Spring 2024 semester. You will purchase access to the digital materials via a Purdue University Online link (http://www.eventreg.purdue.edu/online/CHMSpring35). Payment is due by January 22, 2024.
- Note: Other materials may be provided by the instructor.

Course website

Brightspace is our course management system. You can access the course website at http://purdue.brightspace.com. Most class materials, including chapter reading guides and laboratory handouts, will be made available on our class Brightspace site. Brightspace will also be used for your grade records and class notes.

Achieve: Homework, Extra Credit, E-book and Resource Access

Achieve is used for:

- Homework assignments
- Extra credit assignments (Learning Curve)
- Goal Settings and Reflection Surveys (Checkpoint surveys)
- Access to E-book and related chapter materials

OneNote via O365

OneNote via your Purdue O365 account.

- Homework Notebook: All students must keep a homework notebook in OneNote. The homework notebook is NOT the same as your class notes. You may use any notebook you like for class notes, but you may NOT use your homework notebook for class notes.
  - The following should be recorded in the homework notebook:
    - Attempts at practice problems listed on the reading guides.
    - Notes taken on in-class demos.
    - Notes taken on in-class simulations/videos.
    - Notes taken on other assigned activities.
  - Homework notebook activities will be assigned by your TA.
- Lecture recordings will be made available via Brightspace.
- Recitation recordings will be made available via Brightspace.
- All Laboratory procedures will be made available to you via OneNote (as a Digital Lab Manual).
- All Laboratory notes will be completed via OneNote and your TA will grade your labs electronically.

Recitation

Recitation sessions will be conducted by your TA. These sessions are designed to help you prepare for laboratory work and to learn by completing recommended practice problems and other homework notebook activities with the guidance of your TA. The recitation time may also be used to review key concepts from lecture material, work on problems from the Achieve problem sets, remind students about upcoming deadlines, address questions in preparation for or

to clarify after exams, and addressing questions regarding laboratory procedures or reports. Please come to recitation prepared with questions.

Exams

There will be three (3) during-semester exams and a comprehensive final exam in this course. All exams will be in-person in the evening. Dates for all midterm exams are included in the syllabus. Each midterm exam will be one hour long. Exact exam policies will be given separately to this syllabus. Details for the Final Exam will be given separate to this syllabus as well.

Course Learning outcomes

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

1. Demonstrate competency of CHM 12600 chemistry concepts through solving of numerical-based chemistry problems.

    - Methods of Evaluation: On-line homework assignments, OneNote Homework Notebook work, and numerical-based problems on exams

2. Demonstrate a mastery of concepts, theories, and ideas of chemistry topics covered in CHM 12600.

    - Methods of Evaluation: Written explanations in OneNote Homework Notebook work and through conceptual problems on exams

3. Connect CHM 12600 chemistry topics to real-world problems and solutions that you and others experience.

    - Methods of Evaluation: Written answers using evidence-based arguments in OneNote Homework Notebook work and multiple choice and conceptual problems on Exams.

4. Meet the Laboratory Learning Objectives.
    - Methods of Evaluation: Written lab reports and laboratory notebook.

Class Policies

- If you feel sick, or are asked to quarantine, do not come to class or lab.

- You may use computers or tablets only for taking notes in class. Use of computers/cell phones/tablets or other internet connected device during class to access non-class related materials (facebook, twitter, youtube, tiktok, snapchat, text messages, etc.) is prohibited.

- All work must be completed individually. Please do not share answers to problem sets. Many laboratory experiments may be done in teams of two or three, however, each laboratory report should be completed individually.

- In general, class lectures (audio recordings, lecture notes, and images therein) are "considered to be 'derivative works' of the instructor's presentations and materials, and they are thus subject to the instructor's copyright in such presentations and materials." As such, they cannot be sold or bartered or posted online without express written permission from Dr. Starr.

- Changing Sections / Dropping the Course / Check-Out:

    - A change in lab section requires the approval of Dr. Starr after the first week of classes. Because of the processes associated with assigned lab drawers and the formation of teams for lab work, section changes (or late additions to the course) will not be permitted after the third week of classes. Note that if you change sections after you check into a lab drawer, you must check out of your old lab drawer before checking into a lab drawer in your new section.

    - If you drop CHM 12600 after having checked into a lab drawer, it is your responsibility to check-out of your lab drawer during your scheduled lab period. Failure to check-out of lab will result in a $45 fee, and forfeiture of the right to determine the acceptability of all lab drawer equipment.

Grading

The grade for CHEM 12600 consists of the following:

- 12 homework problem sets, scaled to 10 pts. each. Homework answers are submitted on-line via the Achieve website. Late submissions will be accepted with a penalty (25% off per day for up to three days), unless an extension is granted for an excused reason. There will be 10 Achieve homework problem sets. The oxidation number worksheet and the acid-base problem set will be counted as homework assignments (submitted on Gradescope).

- Three exams, 50 pts. each. Exams consist of a combination of multiple choice and numerical problems. Problems are both qualitative and quantitative. Partial credit will be awarded for correct work shown on short answer questions. Make-up exams will be given for excused reasons only.

- Laboratory: 10 pts. each. 12 laboratory experiments will be conducted with individual reports completed for each lab. Late submissions will not be accepted and missed labs are scored as a zero grade. Students who fail to complete 10 labs will fail the course, unless excused by Dr. Starr.

- Homework notebook: 40 pts. Each student must keep a homework notebook within OneNote. See details below.

- Comprehensive final exam: 100 pts.

- Grading Scale (% out of 530 total pts):

93.0% - 100%	A
90.0% - 92.9%	A-
86.0% - 89.9%	B+
83.0% - 85.9%	B
80.0% - 82.9%	B-
76.0% - 79.9%	C+
73.0% - 75.9%	C
70.0% - 72.9%	C-
66.0% - 69.9%	D+
63.0% - 65.9%	D
60.0% - 62.9%	D-
Below 60%	F

Note: Grades are rounded to one decimal place only.

Incompletes

A grade of Incomplete (I) will be given only in unusual circumstances. To receive an "I" grade, a written request must be submitted prior to the last lecture date and approved by the instructor. Requests are accepted for consideration but in no way ensure that an incomplete grade will be granted. The request must describe the circumstances, along with a proposed timeline for completing the course work. You will be required to fill out and sign an "Incomplete Contract" form that will be turned in with the course grades. Any requests made after the course is completed will not be considered for an incomplete grade.

Attendance:

Attendance in lecture and recitation is not required for a grade, however, you will be responsible for all information, including assignments, policy changes, schedule changes, etc., announced in lecture or via e-mail to the class. Recordings of lectures and recitations and class lecture notes will be available on our class Brightspace.

Excused Absences

Missed work (homework, homework notebook, lab, exams) will be excused, extended, or allowed for make up in the following cases:

- Grief Absence Policy (GAPS), Military Absence Policy (MAPS), Jury Duty, Parenting Leave, Medically Excused Absence Policy for Students (MEAPS): Students must work with ODOS – Office of the Dean of Students (765-494-1747) for any of these excused absences. Generally, MEAPS may be an option for students who must miss class for **emergent or urgent care**. A member of the Dean of Students staff will notify the student's instructor(s) of the circumstances. The student should be aware that this intervention does not change in any way the outcome of the instructor's decision regarding the student's academic work and performance in any given course.

- COVID-19 illness or related quarantine (on a case by case instance and may require notice from the Protect Purdue Health Center/PUSH)
- Other emergency external circumstances, as approved by your instructor

If you are sick, do not come to lecture or recitation, instead, watch the lecture recording on Brightspace. Once you are well, Dr. Starr will work with you to help you catch up.

If you are sick, do not come to lab. Instead, inform your TA and Dr. Starr and an online version of the lab will be assigned. Note: You MUST notify your TA and Dr. Starr that you are sick **within 10 mins** of when your lab period starts in order to receive an online version of the lab, or else you will receive a 0 grade for the lab. Students are only allowed to complete the online version of two labs unless the student has prior permission from Dr. Starr.

In most cases, homework, labs, and tests that results from one of the above excused absences must be made up on schedule, however, an extension may be given at the discretion of Dr. Starr. ***Official accommodations for extra-time, quiet testing room, etc. must be approved by the DRC.***

Certain instances are unexcused:

- being dismissed from lab for safety violations, including improper dress and goggle infractions
- arriving more than 10 minutes late for lab
- leaving lab early or otherwise not completing the lab project and/or report
- inadequate preparation that hinders lab participation
- not contributing constructively to the group's work in lab
- failure to submit a lab report

Protect Purdue

See: https://protect.purdue.edu for details on Protect Purdue.

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 properly wearing a mask) may leave the room without consequence. The student is encouraged to report the behavior to and discuss the next steps with their instructor. Students also have the option of

reporting the behavior to the Office of the Student Rights and Responsibilities. See also Purdue University Bill of Student Rights."

Course Evaluation

During the last two weeks of the course, you will be provided with an opportunity to evaluate this course and your instructor. Purdue now uses an online course evaluation system. You will receive an official email from evaluation administrators with a link to the online evaluation site. You will have up to two weeks to complete this evaluation. Your participation is an integral part of this course, and your feedback is vital to improving education at Purdue University. I strongly urge you to participate in the evaluation system.

An opportunity to evaluate your TA will also be provided.

Sources of Help

There are several free sources of help for CHM 12600 students:

- Professor office hours (or by appointment)
- TA office hours
- The Chemistry Resource Room (WTHR 117 B)
- **(TBD)** COSINE (College of Science Instructional Nightly Enrichment) is a FREE tutoring program to help students succeed in first year science courses.
- Purdue Academic Success Center: https://www.purdue.edu/asc/

Academic Integrity

Purdue prohibits "dishonesty in connection with any University activity. Cheating, plagiarism, or knowingly furnishing false information to the University are examples of dishonesty." [Part 5, Section III-B-2-a, University Regulations] Furthermore, the University Senate has stipulated that "the commitment of acts of cheating, lying, and deceit in any of their diverse forms (such as 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." [University Senate Document 72-18, December 15, 1972]

Please review the following resource pages:

https://www.purdue.edu/odos/academic-integrity

In CHM 12600, academic integrity means "doing your own work" at all times. Discussion of chemical concepts is encouraged, but sharing your answers and work in person, electronically, or on social media for the express purpose of letting other students copy your work is not acceptable. Such a use of technology does not help you learn the material and is considered academic dishonesty. Note: Changing data for a lab project to fit the perceived answer; that is, what you think the answer should be, also constitutes academic dishonesty.

All incidents of academic integrity are referred to the Office of the Dean of Students. Any violation of course policies as it relates to academic integrity will result minimally in a failing or zero grade for that particular assignment, and at the instructor's discretion may result in a failing grade for the course. A student accused of academic dishonesty will be afforded due process as defined by Purdue University procedures. 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.

Purdue's student conduct regulations state the following: *"Students are expected to adhere to the guidelines provided by instructors for academic work so that no student gains an unfair advantage. Using or attempting to use unauthorized materials, information, study aids, notes, or any other device in any academic exercise will not be tolerated. Unauthorized materials may include anything which or anyone who gives a student assistance that has not been approved by the instructor in advance."*

AI sites, such as ChatGPT, are considered **unauthorized** in this course for work that is to be completed and submitted independently. Suspected use of AI sources will result in an investigation by comparing student work to multiple AI sites. In the case of a close or exact match, students will earn 0% for the part of the report that was written using unauthorized methods and be reported to the Office of the Dean of Students.

*The Purdue Honor Pledg*e:

"As a boilermaker pursuing academic excellence, I pledge to be honest and true in all that I do. Accountable together - we are Purdue"

Inclusivity and nondiscrimination

In this course, each voice in the classroom 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. This class supports Purdue's commitment to diversity and welcome individuals of all ages, backgrounds, citizenships, disabilities, sexes, education levels, ethnicities, family statuses, genders, gender identities, geographical locations, languages, military experiences, political views, races, religions, sexual orientations, socioeconomic statuses and work experiences.

Purdue University is committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life. A hyperlink to Purdue's full Nondiscrimination Policy Statement is included in our course Brightspace under University Policies.

Accessibility and Accommodations

Purdue University strives to make learning experiences accessible to all participants. If you anticipate or experience physical or academic barriers based on disability, you are welcome to let me know by presenting a *Course Accessibility Letter* so that we can discuss options. The Course Accessibility Letter must come from the Disability Resource Center (**drc@purdue.edu** or by phone: 765-494-1247).

Safe Learning Environment

As an instructor, one of my responsibilities is to help create a safe learning environment on our campus. I also have a mandatory reporting responsibility related to my role as a faculty member. It is my goal that you feel able to share information related to your life experiences in classroom discussions, in your written work, and in our one-on-one meetings. I will seek to keep information you share private to the greatest extent possible. However, I am required to share information regarding sexual misconduct or information about a crime that may have occurred on Purdue's campus with the University. Students may speak to someone confidentially by contacting the Center for Advocacy, Response, and Education (CARE) at 765-495-CARE (2273).

Mental Health

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.

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 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.

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 Dean of Students for support. There is no appointment needed and Student Support Services is available to serve students 8 a.m.-5 p.m. Monday through Friday. Considering the significant disruptions caused by the current global crisis as it relates to COVID-19, students may submit requests for emergency assistance from the Critical Need Fund: https://www.purdue.edu/odos/resources/critical-need-fund.html

Emergencies -- If there is an emergency, call 911.

EMERGENCY NOTIFICATION PROCEDURES are based on a simple concept – if you hear a fire alarm inside, proceed outside. If you hear a siren outside, proceed inside.

- Indoor Fire Alarms mean to stop class or research and immediately evacuate the building.
- Proceed to your Emergency Assembly Area away from building doors. Remain outside until police, fire, or other emergency response personnel provide additional guidance or tell you it is safe to leave.
- All Hazards Outdoor Emergency Warning Sirens mean to immediately seek shelter (Shelter in Place) in a safe location within the closest building.
    - o "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, an active threat including a shooting or release of hazardous materials in the outside air. Once safely inside, 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.
- 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.

*In all cases, you should seek additional clarifying information by all means possible…Purdue Emergency Status page, text message, Twitter, Desktop Alert, Albertus Beacon, digital signs, email alert, TV, radio.

Other Policies and Statements:

A complete listing of University Policies and Statements is found on our class Brightspace page under Course Content/University Policies and Statements. Policies listed there complement and/or supersede policies written in this syllabus.

Lab Safety

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.

- Dress appropriately (see below).
- Goggles are required at all times in the laboratory, including during report-writing and lab check-out. If you are in lab and your goggles are not covering your eyes, you will be sent home and will receive a zero for the lab and the lab report (failure to complete).
- Wear gloves.
- If your hair is longer than shoulder length, you must tie it behind your head.
- Food and beverages are not allowed in the labs. (No water bottles in lab!)
- Follow your instructor's guidance on appropriate handling of hazardous materials and disposal of chemical waste.
- Promptly clean up spills and tidy the laboratory before leaving.

Proper dress (clothing and shoes) is required. Your clothing must cover you from your neck (collarbone) to your ankles when sitting, standing or reaching. Your feet must be completely covered by your shoes.

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 (below the collar bone), bare midriff or tank-style
- see-through, transparent or sheer clothing
- pants that are ripped or have holes in the fabric of *any* size
- tights or thin (translucent or transparent) leggings
- Capri or cropped pants
- shorts
- short skirts
- 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

If you come to lab wearing anything in the list above, you will be sent home and you will get a zero for that lab and it will count as a missed lab.

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

Class and Laboratory Schedule:

Note: In the event of a major campus emergency or COVID-19 related issues, course requirements, deadlines and grading percentages are subject to changes that may be necessitated bey a revised semester calendar or other circumstances beyond the instructor's control. Relevant changes to this course will be posted onto the course Brightspace and/or Teams/OneNote sites or can be obtained by contacting the instructors or TAs. You are expected to read your @purdue.edu email on a frequent basis.

Week	Day	Date	Lecture or Lab Topic	Notes
1	Monday	Jan-8	Course overview & Syllabus Review	Bring your Laptop or Tablet to Class
	Tuesday	Jan-9	No recitation	
	Wednesday	Jan-10	Chapter 12	
	Thursday	Jan-11	No Lab	
	Friday	Jan-12	Chapter 12	
2	Monday	Jan-15	No Lecture – MLK Day	
	Tuesday	Jan-16	Recitation	
	Wednesday	Jan-17	Chapter 12	Safety Certification Quiz due (does not count toward course grade)
	Thursday	Jan-18	Lab Check in, use of iPads, Lab 1: Intermolecular Forces	
	Friday	Jan-19	Chapter 12	
	Sunday	Jan-21	Lab 1 due	Lab 1 due
3	Monday	Jan-22	Chapter 12	
	Tuesday	Jan-23	Recitation	

	Wednesday	Jan-24	Chapter 13	Chapter 12 Homework due
	Thursday	Jan-25	Lab 2: Freezing Point Depression	
	Friday	Jan-26	Chapter 13	
	Sunday	Jan-28	Lab 2 due	Lab 2 due
4	Monday	Jan-29	Chapter 13	
	Tuesday	Jan-30	Recitation **Exam #1**	Exam #1 covers chapters 12 & 13
	Wednesday	Jan-31	Chapter 14	Chapter 13 Homework due
	Thursday	Feb-1	Lab 3: TLC	
	Friday	Feb-2	Chapter 14	
	Sunday	Feb-4	Lab 3 due	Lab 3 due
5	Monday	Feb-5	Chapter 14	
	Tuesday	Feb-6	Recitation	
	Wednesday	Feb-7	Chapter 14	
	Thursday	Feb-8	Lab 4: Crystal Violet Kinetics (CV)	
	Friday	Feb-9	Chapter 14	
	Sunday	Feb-11	Lab 4 due	Lab 4 due
6	Monday	Feb-12	Chapter 14	
	Tuesday	Feb-13	Recitation	
	Wednesday	Feb-14	Chapter 14	
	Thursday	Feb-15	Lab 5: Activation Energy	
	Friday	Feb-16	Chapter 15	Chapter 14 Homework due

	Sunday	Feb-18	Lab 5 due	Lab 5 due
7	Monday	Feb-19	Chapter 15	
	Tuesday	Feb-20	Recitation	
	Wednesday	Feb-21	Chapter 15	
	Thursday	Feb-22	Lab 6: Iron(III) Thiocyanate Equilibrium System	
	Friday	Feb-23	Chapter 15	
	Sunday	Feb-25	Lab 6 due	Lab 6 due
8	Monday	Feb-26	Chapter 16	Chapter 15 Homework due
	Tuesday	Feb-27	Recitation **Exam #2**	Exam #2 covers chapters 14-15
	Wednesday	Feb-28	Chapter 16	
	Thursday	Feb-29	Lab 7: Essentials of Acids & Bases	
	Friday	Mar-1	Chapter 16	
	Sunday	Mar-3	Lab 7 due	Lab 7 due 1st half of HW notebook due
9	Monday	Mar-4	Chapter 16	
	Tuesday	Mar-5	Recitation	
	Wednesday	Mar-6	Chapter 16	
	Thursday	Mar-7	Lab 8: Acid-Base Equilibria	
	Friday	Mar-8	Chapter 17	**Lab 8 Due** **Chapter 16 Homework due**

March 11-15 – Spring Break				
10	Monday	Mar-18	Chapter 17	
	Tuesday	Mar-19	Recitation	
	Wednesday	Mar-20	Chapter 17	
	Thursday	Mar-21	Lab 9: Ksp	
	Friday	Mar-22	Chapter 18	Chapter 17 Homework due
	Sunday	Mar-24	Lab 9 due	Lab 9 due
11	Monday	Mar-25	Chapter 18	
	Tuesday	Mar-26	Recitation	
	Wednesday	Mar-27	Chapter 18	
	Thursday	Mar-28	Lab 10: How Do We Determine K, ΔH, ΔS, ΔG	
	Friday	Mar-29	Chapter 18	**Lab 10 due**
12	Monday	Apr-1	Chapter 18	Chapter 18 Homework Due
	Tuesday	Apr-2	No recitation **Exam #3**	Exam #3 covers chapters 16-18
	Wednesday	Apr-3	Chapter 19	
	Thursday	Apr-4	No Lab – Ox. Numbers Worksheet	
	Friday	Apr-5	Chapter 19	Ox. Numbers Worksheet due
13	Monday	Apr-8	Chapter 19	
	Tuesday	Apr-9	Recitation	
	Wednesday	Apr-10	Chapter 21	Chapter 19 Homework Due

	Thursday	Apr-11	Lab 11: A Metal Ion Sensor	
	Friday	Apr-12	Chapter 21	
	Sunday	Apr-14	Lab 11 due	Lab 11 due
14	Monday	Apr-15	Chapter 23	Chapter 21 Homework Due
	Tuesday	Apr-16	Recitation	
	Wednesday	Apr-17	Chapter 23	
	Thurs	Apr-18	Lab 12: How can we isolate biomolecules?	
	Friday	Apr-19	Chapter 20	Lab 12 Due, Chapter 23 HW Due
	Sunday	Apr-21	2nd half of HW notebook due	
15	Monday	Apr-22	Chapter 20	
	Tuesday	Apr-23	Recitation	
	Wednesday	Apr-24	Chapter 20	
	Thursday	Apr-25	Lab Checkout	
	Friday	Apr-26	Final Exam Problem Solving	Chapter 20 Homework Due (optional)
16	TBD	Apr 29- May 4	Final Exam, date and time TBD.	Part I: 50 pts. Chs 19, 21, 23, 20 Part II: 50 pts., Ch 12-18

Disclaimer: *This syllabus is subject to change.*