

IOWA STATE UNIVERSITY

COURSE SYLLABUS

CHEM 177

General Chemistry 1

Recommended for physical and biological science majors, chemical engineering majors, and all others intending to take 300-level chemistry courses. General Chemistry I (CHEM 177) covers: principles and quantitative relationships, stoichiometry, atomic structure, periodic relationships, chemical bonding, gases, liquids and solids.

COURSE INSTRUCTOR INFORMATION

INSTRUCTOR

Emily King, M.S.

OFFICE

1281 Gilman Hall

EMAIL

ecross@iastate.edu

** Email is the best way to contact me and I will do my best to respond within 24 hours (weekend emails will be responded to on Monday mornings)*

OFFICE HOURS

All office hours will be hybrid meaning you can come to my office and ask questions in person, or you can attend via Webex. On Canvas under the Webex tab you will find the link for the office hours.

Tuesdays 4:00 pm

Fridays 11:00 am

Or by appointment

PREREQUISITES

MATH 140 College Algebra (or high school equivalent) and CHEM 50 preparation for College Chemistry (or 1 year high school chemistry) and credit or enrollment in CHEM 177L (laboratory).

Only one of CHEM 163, 167, 177, or 201 may count toward graduation.

COURSE REGISTRATION

CHEM 177 and 177L are co-requisite courses; students in CHEM 177 are required to take CHEM 177L at the same time, or to have already received credit in 177L. Students who do not meet the co-requisite should drop the course or they will receive an F in the course. Students who drop or audit CHEM 177 are required to drop 177L and vice versa. Chem 177L is administered separately from this course, so questions regarding issues for the lab need to go to Dr. Sara Pistolessi the lab instructor (sarachem@iastate.edu), Brittany Ginnaty (bginnaty@iastate.edu), the head teaching assistant for Chemistry 177L, and your lab TA.

DROP

Last day to **add/drop without signatures & without counting against limit of drops**: August 25th (*To add or drop lecture or lab sections during the first week of class, use AccessPlus.*)

Last day to **drop** without extenuating circumstances: October 27th (Friday)

(*After the first week of classes, to add the class, contact isuchemistry@iastate.edu; to drop contact your academic adviser.*)

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AUDIT

Deadline to **audit**: September 1st at 5 p.m. (Friday)

COURSE DESCRIPTION

Chemistry 177 is the first semester of a two-semester sequence which explores chemistry at a greater depth and with more emphasis on concepts, problems, and calculations than Chemistry 163. Recommended for physical and biological science majors, chemical engineering majors, and all others intending to take 300-level chemistry courses. Principles and quantitative relationships, stoichiometry, chemical equilibrium, acid-base chemistry, thermochemistry, rates and mechanism of reactions, changes of state, solution behavior, atomic structure, periodic relationships, chemical bonding. Chemistry and Biochemistry majors may consider taking [CHEM 201](#). Prerequisites include [MATH 140](#) or 2 years of high school algebra and 1 year of high school geometry and CHEM 50 or 1 year of high school chemistry necessary. Only one of Chem 163, 167, 177, or 201 may count toward graduation.

COURSE FORMAT

Asynchronous online.

The Monday's time mentioned in the schedule of classes is for administrative purposes: this course is delivered online (other than the final exam). This said, Emily King has student (office) hours on Tuesdays at 4:00 - 5:00 pm and Friday 11:00 - 12:00 pm. Join via the Webex tab on Canvas. Student (office) hours are for asking questions about course policies and chemistry. You can also come to Gilman 1281 to meet in person during student hours if you would like. If you have questions that are personal in nature, I encourage you to email eross@iastate.edu to set up an appointment.

On Canvas, you can find a detailed schedule with the dates by which you are expected to complete the Modules and the corresponding assignments, including midterm exams; these are all online. **The final exam will be in-person.** See below for more details.

COURSE LEARNING OBJECTIVES

1. **By completing the course, the students will be able to interpret and explain** the connection between symbolic representations (the microscopic level) and the amounts of substance (the macroscopic level) when given a qualitative or quantitative problem involving a chemical system. To achieve this goal, students will learn about atoms, bonding, and chemical reactions.
2. **By completing the course, the students will be able to assess, describe, and ultimately predict** the chemical and physical properties of elements and compounds (gaseous, liquid, and solid materials). To achieve this goal, students will learn about structure, bonding, and inter-molecular interactions.
3. **By completing the course, the students will be able to recognize** the importance of energy in chemical and physical processes and will **assess** and **describe** the feasibility and energetic implications of any process under specific conditions. Students will learn about energy and thermodynamics.
4. **By completing the course, the students will be able to** make connections between topics seen within this course as well as between chemistry and other disciplines such as physics, natural sciences, engineering. Students will be able to approach chemistry not just as a collection of isolated chemistry facts, but as a systemic discipline, one in which the study of the inner systems (e.g., the molecular

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perspective) allows to better understand most outer systems (e.g., engineering, medicine, environment, social contexts, etc.).

TEXTBOOKS AND MATERIALS

CANVAS

Canvas is the Learning Management System (LMS) for the university and will be used for this course <https://canvas.iastate.edu>. In it you will find all of the material (i.e., lecture videos and quizzes) that you will need for the course. You should check this site frequently.

CALCULATOR

A nonprogrammable scientific calculator with basic functions including logarithms and exponential functions is needed for the course.

TEXTBOOK/OWL

The textbook for this course is Chemistry, 10th edition by Zumdahl, Zumdahl and DeCoste published by Cengage.

To accompany the book, OWLv2 will be used for homework and exam reviews. Through the Immediate Access Program, you will have access to these materials on the first day of class at a reduced price compared to the national average. You must have OWLv2 to complete online homework and exam review assignments. You can learn more about the Immediate Access Program below and in the modules on Canvas.

COMPUTER

Due to the online nature of this course, it is important that you have a reliable internet connection. Your computer should be able to access Iowa State Universities computer system and your Learning Management System (Canvas etc.). Lastly you should make sure that your computer has a microphone and audio capabilities.

COURSE RESOURCES

TECH SUPPORT

For Tech Support, contact elotech@iastate.edu Engineering-LAS Online Learning (ELO) for COE and LAS only. Please enter your respective college's tech support email if you do not belong to COE or LAS. Go to Canvas Help for more information on finding help with Canvas.

CHEMISTRY HELP CENTER

Teaching assistants from all courses are available to answer questions on the course material in the Martha E. Russell Chemistry Help Center and Resource Room (1761 Gilman Hall). This Center is open M – R, 9am – 6pm, and F, 9am – 1pm. See the schedule on Canvas for the breakdown of when a Chem 177 TA will be available.

SUPPLEMENTAL INSTRUCTION

Information on supplemental instruction can be found on the [SI website](#).

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LIBRARY ACCESS

To login from off-campus: When you're off ISU campus and would like to access one of ISU's subscription databases or licensed full text resources (such as journal articles, e-books, and journals) from the [Library website](#), you will be prompted to login using the last 11 digits of your ISU University ID (9-digit University ID plus the following 2-digit Security Code) and [the Library password \(Borrower ID password\) you set](#).

Even if you do not have a physical ISUCard, you do have an ISU University ID number. If you don't remember that number, you can login to [AccessPlus](#) using your social security number and verify your University ID number.

Login questions or problems? Contact Circulation Desk staff: Phone (515) 294-3961 or email CircDesk@iastate.edu

See also the Library's [Distance Learning Support](#) guide for more information on access, how to find and search helpful databases, and how to get articles and books you need sent to you.

HOW TO SUCCEED IN THIS COURSE

- **Take time to familiarize yourself** with the course structure and layout in the Learning Management System being used (Canvas) or other technology used in the course.
- **Read** the essential documents – course syllabus/course schedule.
- **Identify and establish** the **communication channels** provided – Help Forums/online meetings/Email/groups discussion forums
- **Confirm technical requirements** –so that you can access all the materials
- **Plan your time** – have a personal schedule, a consistent study time and stay organized. **DO NOT WAIT UNTIL THE LAST MOMENT TO WORK ON YOUR ASSIGNMENTS** study for an exam, etc.
- **Make connections** with fellow classmates and me as instructor.
- **Ask Questions** – Don't wait. Ask questions regarding expectations/content/policies. Follow the mentioned protocols for the course.
- Become familiar with [the way the To Do list works in Canvas](#) to help you stay organized.
- **Log-in to the course at least 3 times** in a day.

ASSIGNMENTS and GRADING

HOMEWORK

OWL will be used for homework assignments. *They will be due at 11:59 pm on the due date.* You must have access to OWL to receive credit for homework. **Homework is designed to help you master a topic before we move on to the next topic; thus, you must complete the work by the scheduled deadline.** The settings on the homework are meant to be non-punitive, so you can get essentially all the points if you work them through with some patience. We readily acknowledge that the time you spend on the homework will probably be disproportionate to the points. The points are really there to nudge you to do them! The reward for doing the homework well will come from doing well on the exams.

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Note that the "Mastery" homework assignments are the graded ones. They require you to get two problems right in a row on a given topic. You have 7 attempts at each problem, and you are provided with guidance and hints.

There is a separate link to a large set of typical "end of chapter" homework questions for each module. These are entirely optional but are good practice for you.

QUIZZES

These should be completed after reading the corresponding parts in the textbook and notes and viewing the corresponding videos. They are a fundamental part of the learning process and will help you master the topics while you study them. See Schedule and go to Canvas for exact due dates. You must complete the work by the scheduled deadline (*due at 11:59 pm on posted date*). There are no exceptions to this policy and no extensions or make-ups for Quizzes will be granted.

For each module, there are two 5-question Quizzes, which are primarily meant as formative learning tools. You should take the first one after watching the first 2-3 videos and then the second at the end. The settings on these quizzes will include having two chances for each questions, so it is expected that most students will score very well on these. The solutions will be posted once the due date has passed.

EXAM REVIEW

To help prepare you for the exam, an exam review will be administered through OWL. This is an adaptive exam review in which you will take a pre-quiz over the material that will be covered on the exam. You will then be presented with the topics that you may need some more practice with. Attached to each of these questions is a series of practice questions and/or activities for you to work through to improve your understanding. You can also go back and review the lecture videos. Once you have gone back and studied some more you can then retake the quiz. You can keep repeating this process until you feel comfortable with the material. To get full points you need to achieve an 80% for the activity (click on *progress* to see score).

MIDTERM EXAMS

There will be three 70-minute exams throughout the semester. The exam dates and material that will be covered on them is listed below. The three exams will be online. Midterm exams will be open from 8 am until 8 pm on the day they are administered, and you will be allotted 70 minutes to complete them. There are no make-up exams. If you have a valid, serious reason to miss an exam, you need to immediately contact the me at cross@iastate.edu. You will be asked to drop the course if you miss more than one exam. Information specific to each exam will be communicated via email and on Canvas.

These tests are randomized and set up to give slightly different questions to each student. Either the question will vary slightly or the choices will vary slightly, but the questions are meant to be identical in their degree of difficulty. Questions are either multiple choice or exact answer (type a numerical value or word answer).

Unfortunately, you will not be able to freely look at your tests after they are taken. You are welcome to schedule an appointment with your instructor at any time to see your exact test and responses and go over the answers.

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EXAM	DATE	TOPICS COVERED	OPEN WINDOW	TIME LIMIT	LOCATION
1	Friday 9/22	Chapters 1 – 3	8 am – 8 pm	70 minutes	Online
2	Friday 10/20	Chapters 4 – 7	8 am – 8 pm	70 minutes	Online
3	Friday 11/17	Chapters 8 – 10	8 am – 8 pm	70 minutes	Online
Final	TBD	Comprehensive (1-10)			In-Person

FINAL EXAM

A mandatory comprehensive *in-person* final exam will be held during finals week. Date and time of the final exam will be determined by the University's final exam schedule. This exam will cover all material from the course (comprehensive). The exam will be the standardized General Chemistry, First Term Exam provided by the American Chemical Society.

GRADES

GRADE DISTRIBUTION

ASSIGNMENTS	PERCENTAGE
Homework (Mastery)	15%
Quizzes	10%
Exam Review	10%
Exams	45%
Final Exam	20%
Total	100%

GRADING SCALE

LETTER GRADE	SCALE	LETTER GRADE	SCALE
A	93.00 – 100	A-	90.00 – 92.99
B+	87.00 – 89.99	B	83.00 – 86.99
B-	80.00 – 82.99	C+	77.00 – 79.99
C	73.00 – 76.99	C-	70.00 – 72.99
D+	67.00 – 69.99	D	63.00 – 66.99
D-	60.00 – 62.99	F	59.99 and below

GRADE POLICIES

Final grades are based solely on graded work and are NOT negotiable; no make-up or extra credit points will be offered. The final grade distribution will be consistent with prior semesters.

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Any student who discovers an error in a grade in **Canvas** must contact me within 1 week of receiving the graded work to have the grade corrected.

COURSE POLICIES

LATE ASSIGNMENTS

Homework, Quizzes, and Exam Reviews are designed to help you master a topic before we move on to the next topic; thus, you must complete the work by the scheduled deadline. Missing the deadline to submit the Homework, Quizzes and Exam Review will result in a score of zero on these assignments. Missing the window to take the exam will result in an automatic score of zero. This said, please contact me at ecross@iastate.edu should you have extraordinary circumstances that prevent you from completing the assignment by the deadline. You must contact me as soon as possible.

Students occasionally run into problems with browsers, service interruptions, or other related matters that may require technical assistance at homework deadlines. If you have a problem of this sort, contact me *immediately*.

DEADLINE EXTENSION

Deadlines are firm. Communication is important: if you know you will be unable to complete an assignment because of illness or another emergency, contact me in advance. If the illness or other emergency happens on the day the assignment is due, you must contact me ASAP and by 10:00 am the day after the deadline.

SCORES

Quizzes and exams are automatically graded directly on Canvas. OWL (mastery and exam reviews) are automatically graded on the OWL site and are automatically synched into Canvas periodically. Errors may occur: OWL may experience a glitch and not import the correct score. On an exam or quiz, the correct answer may be incorrect. If you believe that an error occurred, you must inform me immediately, and by one week (7 days) after the assignment due date. It is your responsibility to regularly check grades on Canvas.

FINAL GRADES

Final grades are based solely on graded work and are NOT negotiable, no single student will be offered make-up assignments or extra credit points.

EXPECTED ONLINE BEHAVIORS

- All communication within the course should adhere to university standards of [Netiquette at ISU](#). Specifically, communication should be scholarly, respectful, professional, and polite.
- You are expected to follow [ISU's Principles of Community](#).
- You may disagree with other students, but such disagreements need to be based upon facts and documentation. It is my goal to promote an atmosphere of mutual respect in our interactions. Please contact me if you have suggestions for improving the interactions in this course.
- Professional and respectful tone and civility are used in communicating with fellow learners and me, whether the communication is by electronic means or by phone or face-to-face.
- Video interactions reflect a respectful tone in verbal communications and body language.
- Use correct spelling and grammar.

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GROUND RULES FOR THE EXAM

You must work independently.

You are permitted use the following authorized resources to complete the exams:

- A nonprogrammable scientific calculator
- Paper and pens/pencils (any work on scratch paper will not be graded.)

You are NOT permitted to do the following:

- You may NOT communicate with anyone else about the exam.
- You may NOT have someone else help you solve the questions.
- You may NOT post questions about the exam to the Help Forum on Canvas.
- You may NOT post and/or consult unauthorized aids, including paid-for subscriptions to Chegg, Scribd, or tutoring services.
- You may NOT search the questions in a search engine (e.g., Google).

We actively monitor external sites for illicit behavior.

GROUND RULES FOR HOMEWORK AND QUIZZES

You are permitted use the following authorized resources to complete HW and PRQ:

- Scientific or graphing calculator, Excel (for calculations.)
- Paper and pens/pencils (any work on scratch paper will not be graded.)
- Your course notes, homework assignments, Mini Quizzes.
- CHEM 177 Canvas course content and any links to external webpages that are provided therein.
- You may post questions about HW and PRQs on the Help Forum and/or ask a TA in the Chemistry Help Center; you will not receive a direct answer (e.g. the solution to the problem) but you will be advised on how to proceed in the solution.

You are NOT permitted to do the following:

- You may NOT have someone else solve the questions for you.
- You may NOT post and/or consult unauthorized aids, including paid-for subscriptions to Chegg, Scribd, or tutoring services.
- You may NOT search the questions in a search engine (e.g. Google).

UNIVERSITY POLICIES

ACADEMIC MISCONDUCT

Academic misconduct is a violation of the behavior expected of a student in an academic setting as well as a student conduct violation. A student found responsible for academic misconduct is subject to the appropriate academic penalty, determined by the instructor of the course, as well as sanctions under the university [Student Disciplinary Regulations](#). Depending on the act, a student could receive an F grade on the test/assignment, F grade for the course, and could face suspension from the University. See the Student Disciplinary Regulations at <http://www.policy.iastate.edu/policy/SDR> for more details and a full explanation of the policy on Academic and Research Misconduct by students.

You are expected to practice academic integrity in every aspect of this course and all other courses. Familiarize yourself with the ISU Student Disciplinary Regulations (Student Conduct Code), especially the section on academic misconduct, at <http://www.policy.iastate.edu/policy/SDR>. Students who

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engage in academic misconduct are subject to university disciplinary procedures, as well as consequences with regard to this course.

Some forms of academic dishonesty:

Obtaining unauthorized information. Information is obtained dishonestly, for example, by copying graded homework assignments from another student, by working with another student on a take-home test or homework when not specifically permitted to do so by the instructor, by looking at your notes or other written work during an examination when not specifically permitted to do so, or obtaining work from an online homework or exam warehouse.

Tendering of information. Students may not give or sell their work to another person who plans to submit it as his or her own. This includes giving their work to another student to be copied, sharing work when the instructor's directions were that work be completed independently, giving someone answers to exam questions during the exam, taking an exam and discussing its contents with students who will be taking the same exam, or giving or selling a term paper to another student.

Misrepresentation. Students misrepresent their work by handing in the work of someone else. Examples include: purchasing a paper from a term paper service; reproducing another person's paper, project, research, or examination (even with modifications) and submitting it as their own; having another student do their computer program, complete their design project, or complete their online quiz.

Bribery. Offering money or any item or service to a faculty member or any other person to gain academic advantage for yourself or another is dishonest.

Plagiarism. Unacknowledged use of the information, ideas, or phrasing of other writers is an offense comparable with theft and fraud, and it is so recognized by the copyright and intellectual work laws. Offenses of this kind are known as plagiarism.

Plagiarism is the act of representing directly or indirectly another person's work as your own. It can involve presenting someone's speech, wholly or partially, as yours; quoting without acknowledging the true source of the quoted material; copying and handing in another person's work with your name on it; and similar infractions. Even indirect quotations, paraphrasing, etc., can be considered plagiarism unless sources are properly cited. Plagiarism will not be tolerated, and students could receive an F grade on the test/assignment or an F grade for the course. The Iowa State University policy for academic misconduct can be found in the [Student Disciplinary Regulations](#).

ACADEMIC INTEGRITY

Academic Integrity, based on the values of honesty, trust, fairness, respect, and responsibility, is a fundamental principle of scholarship in higher education. Iowa State's Academic and Research Misconduct Policy prohibits: plagiarism (using another person's writing or copying any work without proper citation), falsification, unauthorized collaboration during a test or on an assignment, or substitution for another student to take an exam, course or test, and other forms of academic dishonesty. If you are to benefit from this class and be properly evaluated for your contributions, it is important for you to be familiar with and follow Iowa State's Academic and Research Misconduct policy. Students are encouraged to review this

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policy online at <http://www.policy.iastate.edu/policy/SDR#4.2.1> and review a brief educational video at <http://knowthecode.dso.iastate.edu/resources/informational-videos>. Work that violates this policy will not be tolerated. Students who are found responsible for a violation of the Academic Misconduct Policy will have both a university process sanction and an academic outcome, that could include a failing grade on the assignment or exam, or a failing grade for the course.

FREE EXPRESSION

Iowa State University supports and upholds the First Amendment protection of freedom of speech and the principle of academic freedom in order to foster a learning environment where open inquiry and the vigorous debate of a diversity of ideas are encouraged. Students will not be penalized for the content or viewpoints of their speech as long as student expression in a class context is germane to the subject matter of the class and conveyed in an appropriate manner.

PUBLIC HEALTH

If you are not feeling well, you should stay home and focus on your health. Should you miss class due to illness, it is your responsibility to work with your instructor to arrange for accommodations and to make up coursework, as consistent with the instructor's attendance policy.

You may choose to wear a face mask and/or receive the COVID-19 vaccine and boosters, as well as other vaccines such as influenza, but those options are not required. Thielen Student Health Center will continue to provide COVID-19 vaccinations free-of-charge to students. The university will continue to offer free masks and COVID-19 test kits during the spring 2023 semester. Other wellbeing resources for students are available at: <https://www.cyclonehealth.iastate.edu/wellbeing-resources/>

Public health information for the campus community continues to be available on Iowa State's public health website. All public health questions should be directed to publichealthteam@iastate.edu

CLASSROOM BEHAVIOR, INCLUDING COMPUTER AND IT CLASSROOM USE

The professional behavior conduct in the ISU Policy on student classroom disruption apply <http://www.dso.iastate.edu/sa/issuesconcerns/disruption>.

Students are not permitted to have on their person or bring unauthorized written materials or electronic devices of any type into the examination room during written or practical examinations without permission of the instructor. Laptop computers are allowed only in examinations that are given electronically using the appropriate assigned student electronic device. If a student is observed to have an unauthorized electronic device during an examination or any unauthorized materials, the student will be quietly asked or given a written statement to stop their examination and be escorted from the room. At that point, the examination will be retained by the instructor or proctor. The event will trigger a thorough investigation of a possible academic dishonesty violation.

ACADEMIC DISHONESTY

The class will follow Iowa State University's policy on academic dishonesty. The instructor/instructor-in-charge observing academic dishonesty reports the student suspected of academic dishonesty to the CVM Office of Academic and Student Affairs Director of Student Programs and/or Associate Dean for Academic and Student Affairs who reports the alleged violation to the Dean of Students Office. The violation also is

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submitted to the ISU CVM Honor Board. Additional campus- wide policies regarding academic misconduct are found at <http://www.dso.iastate.edu/ja/academic/misconduct.html>

PREP WEEK

This class follows the Iowa State University Dead Week policy as noted in section 10.6.4 of the [Faculty Handbook](#)

STATEMENTS ON ACCOMMODATIONS AND RESOURCES

ACCESSIBILITY STATEMENT

Iowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. Students requesting accommodations for a documented disability are required to work directly with staff in Student Accessibility Services (SAS) to establish eligibility and learn about related processes before accommodations will be identified. After eligibility is established, SAS staff will create and issue a Notification Letter for each course listing approved reasonable accommodations. This document will be made available to the student and instructor either electronically or in hard-copy every semester. Students and instructors are encouraged to review contents of the Notification Letters as early in the semester as possible to identify a specific, timely plan to deliver/receive the indicated accommodations. Reasonable accommodations are not retroactive in nature and are not intended to be an unfair advantage. Additional information or assistance is available online at www.sas.dso.iastate.edu, by contacting SAS staff by email at accessibility@iastate.edu, or by calling 515-294-7220. Student Accessibility Services is a unit in the Dean of Students Office located at 1076 Student Services Building.

DISCRIMINATION AND HARASSMENT

Iowa State University does not discriminate on the basis of race, color, age, ethnicity, religion, national origin, pregnancy, sexual orientation, gender identity, genetic information, sex, marital status, disability, or status as a U.S. Veteran. Inquiries regarding non-discrimination policies may be directed to Office of Equal Opportunity, 3410 Beardshear Hall, 515 Morrill Road, Ames, Iowa 50011, Tel. 515-294-7612, Hotline 515-294-1222, email eooffice@iastate.edu.

RELIGIOUS ACCOMMODATION

Iowa State University welcomes diversity of religious beliefs and practices, recognizing the contributions differing experiences and viewpoints can bring to the community. There may be times when an academic requirement conflicts with religious observances and practices. If that happens, students may request the reasonable accommodation for religious practices. In all cases, you must put your request in writing. I will review the situation in an effort to provide a reasonable accommodation when possible to do so without fundamentally altering a course. For students, you should first discuss the conflict and your requested accommodation with your professor at the earliest possible time. You or your instructor may also seek assistance from the [Dean of Students Office](#) at 515-294-1020 or the [Office of Equal Opportunity](#) at 515-294-7612.

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CONTACT INFORMATION

If you are experiencing, or have experienced, a problem with any of the above issues, email academicissues@iastate.edu.

REGARDING THE NAME, GENDER IDENTITY, AND GENDER EXPRESSION

Class rosters are provided to me with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me accordingly early in the semester so that I may make appropriate changes to my records.

REGARDING STUDENT HEALTH AND WELLNESS

Iowa State University is committed to proactively facilitating all students' well-being. We welcome and encourage students to contact the following on-campus services for their physical, intellectual, occupational, spiritual, environmental, financial, social, and/or emotional needs:

- Student Wellness call 515-294-1099 or via the website (<http://studentwellness.iastate.edu>);
- Thielen Student Health Center call 515-294-5801 (24/7 Medical Advice) or via the website (<http://www.cyclonehealth.org>);
- Student Counseling Services call 515-294-5056 or via the website (<https://counseling.iastate.edu>);
- Recreation Services call 515-294-4980 or via the website (<http://recservices.iastate.edu>).
- Students dealing with heightened feelings of sadness or hopelessness, thoughts of harm or suicide, or increased anxiety may contact the ISU Crisis Text Line (Text ISU to 741-741) or contact ISU Police Department 515-294-4428.

RESPONSIBLE EMPLOYEE

Iowa State University is committed to creating an educational, work, living, and campus environment that is free from all forms of sexual harassment, sexual assault, dating violence, domestic violence, stalking, and unlawful discrimination and harassment on the basis of protected class. As a responsible employee, I am responsible for reporting all incidents of prohibited sexual harassment, including sexual assault, stalking, and dating and domestic violence, to the University's Title IX coordinator. Students can choose to discuss their experiences confidentially with the following resources: ACCESS (Assault Care Center Extending Shelter and Support) at 515-292- 0500; ISU Student Counseling Services at 515-294-5056; and Thielen Student Health Center at 515-294-5801

INFORMATION ABOUT ONLINE MATERIAL ACCESS

IMMEDIATE ACCESS PROGRAM

This course is enrolled in the Iowa State University Immediate Access Program. Immediate Access is a collaborative program where the University Book Store, faculty, and publisher have worked together to ensure access to Cengage Learning's "CHEMISTRY+OWL V2" courseware the first day of class at a reduced price compared to the national average. The courseware is required to complete online homework assignments and includes access to the eBook.

What is Immediate Access? Immediate Access is a collaborative affordability initiative between the ISU Book Store, faculty and publishers. Students that are enrolled in an Immediate Access course will receive access to all required digital course materials the first day of class at a reduced cost compared to the national average.

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What digital content is required for this course? The following Cengage Learning OWL V2 courseware is required for your course: Chemistry+OWL V2 (Zumdahl/Zumdahl/DeCoste) Cengage; ISBN: 9781305957572; Price to Students: \$47.00. This book is used in CHEM 178, as well.

How do I access the required digital content? You may find this [video](#) helpful, or follow the instructions below.

Cengage Learning's OWL courseware is required to do online homework for your course. To access OWL in your Canvas course:

1. Go to **Modules** and click on any homework assignment. From there, follow the instructions to activate your account. Important: The FIRST TIME you want to access the digital content, you must access OWL. Do not attempt to open the eBook unless you are registered on OWL.
2. Register for OWL using your Iowa State email. Once you register for the course you should have access to the OWL platform. There is no access code to register. If you are prompted to enter an access code or pay for a code please email Immediate Access (immediateaccess@iastate.edu). Do not pay for a new code.
3. An eBook is included and accessed within the OWL Courseware only. After you are registered in OWL, you may open the eBook using the link on Canvas or from OWL by clicking on "Study Tools". This eBook is NOT accessible through the RedShelf.

How is Immediate Access billed? You will be automatically charged on your u-bill for this digital content. The billing description on your Ubill will appear as CHEM 177 IMMED ACCESS 7572. The amount charged on your Ubill will be the same as the amount listed as the "Price to Student" listed above in the digital content requirements.

What if I drop the course? Students who drop the course within the first 10 days of class will receive a refund on their u-bill (5 days for courses 8 weeks or shorter). You do not have to notify the bookstore if you drop the course. This is an automated process.

Can I opt out of Immediate Access? Students may choose to opt out of the program. Opting out does not mean you are dropping the course. It simply means you are choosing not to receive the digital content from the bookstore and you must find another way to acquire it in order to complete required homework assignments. Students have within the first 10 days of class to opt out and receive a refund to their u-bill (5 days for courses 8 weeks or shorter). Instructions on how to opt out will be emailed shortly before classes start. Be aware that if you drop out you will no longer be able to complete the required homework.

How do I access the required digital content? There is a tool on the navigation menu of your Canvas course called Immediate Access Course Materials. You will receive an email shortly before classes start that will instruct you on how to access the required digital course materials. You may not be able to access the digital content until the first day of class.

Questions? For further questions about Immediate Access please email immediateaccess@iastate.edu.

IOWA STATE UNIVERSITY

CANVAS

Getting Started

1. Be sure to have an ISU NetID. If you do not, please visit Passwords and Accounts (<https://www.it.iastate.edu/services/accounts>)
2. Login to [Canvas](#) with your ISU NetID and password and look for your course for this semester.

Canvas Help

General help with Canvas can be found under the Help link in the global navigation menu on the left side of your Canvas page. You will find:

- [Canvas Live Chat – 24/7 live chat with Canvas specialists](#)
- [Canvas Guides-a repository of how-to's](#)
- [Ask the Canvas Community-Online support forum for canvas users. Log in using ISU credentials.](#)
- ISU Canvas Support Line: Call 515 294 4000, press 2 and then press 1. [Hours of operation.](#)
- Go to [Lynda.com](#) and log in with your ISU credentials. Search for the desired tutorial.

Basic Troubleshooting

- Username/Password not working?
 - The login information (username and password) for Canvas is the same as for your ISU email account.
 - For help with Username and Password, please visit [University Accounts](#) or contact Solution Center at 515-294-4000 or solution@iastate.edu.
- If you get an error message, check for Browser and Java Issues on your computer.
- If you are unable to access course content or activities (e.g., Tests, Discussions, Assignments, etc.), contact your instructor.
- Check general [Technology Support for Students](#)

UNFORESEEN CIRCUMSTANCES AND ADAPTATION OF THE SYLLABUS

Information in the syllabus is subject to change. Changes will be announced in class and posted on the course site on Canvas.

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TENTATIVE COURSE CALENDAR

** All times are in central time*

Module Name	Due By Date	Topic	Lecture Videos	Reading	Homework	Quiz
Intro. to Course	8/25/23 11:59 pm	Course Overview	0a - Instructor Welcome 0b - Syllabus/Schedule Overview 0c - Canvas Overview 0d - OWL Access	Syllabus		Intro Quiz Diagnostic
1	9/1/23 11:59 pm	Chemical Foundations	1a - Stuff! 1b - Theories and Data 1c - Units and Measurement 1d - Accuracy and Precision 1e - Significant Figures 1f - Unit Conversions	Chap 1	Chap 1 Mastery	Quiz 1.1 Quiz 1.2
2	9/8/23 11:59 pm	Atoms, Molecules, and Ions	2a - Early Views of Chemistry 2b - Isotopes and Ions 2c - The Periodic Table 2d - Nomenclature	Chap 2	Chap 2 Mastery	Quiz 2.1 Quiz 2.2
3	9/15/23 11:59 pm	Stoichiometry	3a - The Mole 3b - Determining Molecular Formulas 3c - Balancing Reactions and Stoichiometry 3d - The Limiting Reagent 3e - Theoretical/Expected vs. Observed/Percent Yields	Chap 3	Chap 3 Mastery	Quiz 3.1 Quiz 3.2
Exam 1	9/21/23 11:59 pm				Exam Practice: Chap 1-3	
	9/22/23 8am - 9pm					Exam 1
4	9/29/23 11:59 pm	Types of Chemical Reactions and Solution Stoichiometry	4a - Water 4b - Measuring Concentration 4c - Solubility and Precipitation 4d - Oxidation States and Oxidation Numbers 4e - Balancing Redox Reactions	Chap 4	Chap 4 Mastery	Quiz 4.1 Quiz 4.2

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5	10/6/23 11:59 pm	Gases	5a – Pressure 5b – $PV = nRT$ 5c – Ideal Gas Law Practice 5d – Dalton's Law of Partial Pressure 5e – Kinetic Theory of Gases 5f – Non-Ideality of Gases	Chap 5	Chap 5 Mastery	Quiz 5.1 Quiz 5.2
6	10/13/23 11:59 pm	Thermochemistry	6a – Intro to Thermodynamics 6b – Defining Enthalpy 6c – Calorimetry 6d – Hess's Law	Chap 6	Chap 6 Mastery	Quiz 6.1 Quiz 6.2
Exam 2	10/19/23 11:59 pm				Exam Practice: Chap 4-6	
	10/20/23 8am-9pm					Exam 2
7	10/27/23 11:59 pm	Atomic Structure and Periodicity	7a – A Little Light Reading 7b – Atomic Absorption and Emission Spectra 7c – The Quantum Hydrogen Atom 7d – Multielectron Atoms 7e – Periodic Trends in Ionization Potential and Electron Affinity	Chap 7	Chap 7 Mastery	Quiz 7.1 Quiz 7.2
8	11/3/23 11:59 pm	Bonding: General Concepts	8a – Electronegativity 8b – Ionic Bonds 8c – Covalent Bonding 8d – The Art of Drawing Lewis Structures 8e – Resonance Forms 8f – VESPR	Chap 8	Chap 8 Mastery	Quiz 8.1 Quiz 8.2
9	11/10/23 11:59 pm	Covalent Bonding: Orbitals	9a – Hybridization 9b – Sigma and Pi Bonds 9c – Molecular Orbital Theory 9d – MO Theory Applied to Diatomic Molecules	Chap 9	Chap 9 Mastery	Quiz 9.1 Quiz 9.2
Exam 3	11/16/23 11:59 pm				Exam Practice: Chap 7-9	
	11/17/23 8am-9pm					Exam 3

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10	12/1/23 11:59 pm	Liquids and Solids	10a – Intermolecular Forces 10b – Solids 10c – Phase Changes 1 10d – Phase Changes 2 10e – Phase Diagrams	Chap 10	Chap 10 Mastery	Quiz 10.1 Quiz 10.2
Final Exam	12/7/23 11:59 pm				Exam Practice: Chap 10	
	TBD In Person					Final Exam