General Chemistry I (CHEM 101) - Fall Quarter, 2024

Course components:

1) lecture; **2)** online homework (AKTIV Chemistry); **3)** recitation; and **4)** laboratory.

Learning Outcomes:

At the end of the course, students should be able to:

• explain how chemical reactions transform matter from one substance to another;
• answer conceptual questions about basic chemistry topics;
• solve quantitative problems related to stoichiometry, thermochemistry, and specific gas properties;
• use chemical terminology and units of measure correctly;
• run elementary chemistry experiments, interpret and report experimental data using appropriate software tools;
• develop or improve soft skills (*e.g.*, teamwork, responsibility, work ethic, critical thinking, public speaking, digital literacy, etc.)

Course delivery:

All in-person lectures will run in Disqué 103, except the 101-H (Honors) that will run in Disqué 108. For recitation and lab rooms, please check your schedule. You will have lab classes every other week, starting **week 2** (for **even-numbered** sections) **OR week 3 (**for **odd-numbered** sections**)** (see the **"General Logistics"** and the "**Laboratory"** sections further below, as well as the **Course Schedule** on the last page for more details).

Lecturers:

- Dr. **Monica Ilies**; Chemistry Department; Office: Disqué 224 [course coordinator]
  - Lecture D: Tue, Thu; 1:00-1:50 PM; Disqué 103
- Dr. **Lee Hoffman**; Chemistry Department; Office: Disqué 417 [lab coordinator]
  - Lecture H (Honors): Tue, Thu; 2:00-2:50 PM; Disqué 103
  - Lecture C: Tue, Thu; 11:00-11:50 AM; Disqué 103
- Dr. **Daniel King**; Chemistry Department; Office: Disqué 509
  - Lecture A: Wed, Fri; 9:00-9:50 AM; Disqué 103
  - Lecture B: Wed, Fri; 12:00-12:50 PM; Disqué 103

First e-mail contact for general course questions:
Dr. Monica Ilies**:** mi73@drexel.edu
First e-mail contact for AKTIV Chemistry questions:
Dr. Paul Deroo**:** pwd26@drexel.edu
First e-mail contact for general laboratory questions:
Dr. Lee Hoffman**:** lwh28@drexel.edu
First e-mail contact for specific recitation and lab questions (*e.g.*, grades and/or lab reports writing):
the corresponding recitation/lab instructors **(contact information posted on the main course homepage)**
First e-mail contact for special accommodations questions:
Dr. Lee Hoffman**:** lwh28@drexel.edu

Course Website: https://learn.dcollege.net

Note: Most of our communication will be by e-mail and via the course website. **Please REGULARLY check the course website and your Drexel e-mail account. Make sure you correctly set up your Drexel e-mail account.**

General logistiscs

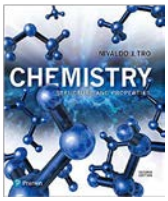
- Recitation and laboratory attendance is **required and graded**.
- Lecture attendance is strongly recommended for your success and it may be recorded, but it is NOT graded. **You are allowed to attend any lecture section.**
- Recitations and lectures start week 1.
- Laboratories start week 2 (for lab sections identified by an even number, *e.g.*, 060, 064, 128, etc.) OR week 3 (for lab sections identified by an odd number, *e.g.*, 067, 87H, 123, etc.). **Please do NOT go to lab during the first week of classes,** even if it appears listed in your master schedule.
- Student (office) hours will be announced in class. If those do not match your schedule, you can e-mail us for an appointment, indicating your availability with multiple options. **You are also welcome to e-mail us with any questions at any time.** Please use **only your Drexel email account** to communicate with us. **Drexel University recommends instructors to NOT reply to student emails that come from external e-mail accounts** (*e.g.*, Gmail, Yahoo, etc.).
- The Department of Chemistry will provide an exam accommodations room. All students with **Accommodation Verification Letters (AVLs)** will be expected to test in the provided room unless other arrangements are made with Dr. Hoffman. Please read the **Disability Resources** section on p. 9.

Course Materials:

All course materials will be used for CHEM 101 (offered in the Fall, Winter, and Summer Terms) and CHEM 102 courses (offered in the Winter and Spring Terms).

a) Textbook: optional (you will have open access to a similar textbook *via* AKTIV Chemistry)

Nivaldo Tro, *Chemistry: Structure and Properties*, Pearson, Second Edition



Note: The third edition of the textbook is also good.

b) Laboratory Manual: required

Edward J. Thorne, Jr., Craig P. McClure, Lee W. Hoffman, *Laboratory Manual for General Chemistry CHEM 101- CHEM 102 2024-2025* **(LAD Custom); ISBN 13: 9798331616335**

Note: You can buy the lab manual **ONLY** from the bookstore website or directly from the bookstore. Old copies of the lab manual **CANNOT** be used (the lab manual has been modified and your data sheets must be new). If you are retaking the class and could not transfer your lab grade (see the **"Laboratory"** section further below), you must buy a new lab manual as well.

c) AKTIV Chemistry access code: required

Note: The AKTIV access code is valid for one quarter term and can be purchased either from Drexel Bookstore or directly from AKTIV. If purchased from AKTIV, it costs about $33.

d) A **simple scientific or graphing calculator** for use in classes and on exams.

Note: A periodic table, key equations and values for constants will be provided for each exam as needed.

e) A pair of **safety glasses or goggles** and a **lab coat** that **must always** be worn in the laboratory.

You can purchase any required course materials wherever you find them the cheapest.

To purchase course materials from Drexel Bookstore, go to
http://drexel.bncollege.com
Scroll down to **"Course Materials Concierge"** and click on **"Search Now"**. Scroll down to **"Select your course(s)"** and choose the following options **only** for the first row**:**
1. under **"Term"**, choose "**Fall Quarter 2024**";
2. under **"Department"**, choose "**CHEM**";
4. under **"Course"**, choose "**101**";
5. under **"Section"**, choose "**001**".
Scroll down the page and click on **"RETRIEVE MATERIALS"** (bottom right corner). All course materials will be listed.

Appropriate software for **online submission of assignments** as **Word or pdf files** is also **REQUIRED**.
The **Microsoft Office package** can be downloaded by Drexel students **for free** using the link below:
https://drexel.edu/it/computers-software/software/

Use Firefox or Google Chrome browsers if you have trouble interacting with BbLearn or Turnitin.

ASSIGNMENTS AND ASSESSMENTS:

CHEM 101 consists of **test-based components** (55%) and **effort-based components** (45%).

The **test-based components** consist of 4 in-term exams and a cumulative final exam, all multiple-choice. You can find general tips and advice in the ***"How to Study Effectively for and How to Take Multiple Choice CHEM 101 Exams"*** document posted in the ***"Lecture Slides"*** folder on the main course homepage.

The **effort-based components** are designed to help students develop or improve soft skills, such as time management, the ability to follow a schedule, respect deadlines, work in a team, pay attention to instructions and requirements, demonstrate an understanding of those instructions (therefore correctly interpret and report experimental data), etc. In the real job market, such skills are just as important as test skills.

The multiple scores for the different course components will reflect the different types of skills and allow you to identify whether you should improve something as you move forward or are on the right track with your study strategies and assignment approaches.

Grading policy:

Students who meet all the requirements will earn grades in the following ranges**: A- to A+** if final score **≥ 90%; B- to B+** if final score **≥ 80%; C- to C+** if final score **≥ 70%; D to D+** if final score **≥ 60%**. Exact grade boundaries will be determined at the end of the term in a meeting with all lecturers, but as a general rule of college grading scale, the letter grade changes at about every 3 units. When determining grade boundaries, we consider student performance across **ALL** course components.

You MUST take the cumulative final exam to pass the course. The **average of all your lab grades MUST be at least 55% to pass the course regardless of your performance in the rest of the course components.**

There are no extra credit assignments at the end of the term, no re-taking of exams/assignments, and no curving of exams in this course. The effort-based course components provide 45% of your final grade, hence you have multiple opportunities to balance out low exam grades, if needed. **Additionally, if you score low on the first assignment or exam, you are strongly encouraged to reach out to your instructors ASAP for help to be**

successful in the class. We want all students to succeed, and you all can succeed through effective study and assignment approach!

Contact your corresponding instructors for any questions about your grades, at any time. Questions about grades should be raised as soon as possible. The course instructors may contact you *via* e-mail if there are problems with your grades.

1. Grading Structure:

Activity	% Grade	Additional Information
Exams	35	See section **3.**
Final Exam	20	See section **4.**
AKTIV Chemistry	15	**Do NOT register for AKTIV Chemistry before reading the "Online Homework - AKTIV Chemistry: Instructions" posted on the main course homepage**
Recitation	10	See section **5.**
Lab	20	See section **6**.
Total	**100**	

2. Lectures:

Lectures will be given on topics and sections of the text listed in the **Course Schedule** (p. 12).

We do not cover all textbook sub-chapters, so lecture slides and other provided materials should be your main resource to study for this class. We use those resources to write exam questions. The **textbook is optional. We will provide all resources needed to be successful in CHEM 101**, as described further. If you opt to purchase or rent the textbook, you should use it only for extra explanations on the different topics taught in class, and for additional practice (through the solved calculation and conceptual problems **within** the corresponding chapters, as well as through the self-assessment quizzes **at the end** of each chapter). However, you do have access to a similar, online, **open access textbook through your AKTIV Chemistry account** (see the **"Read Textbook"** button in the upper right corner of each assignment's homepage).

All lecture slides will be posted on the main course homepage in the ***"Lecture Slide and Recordings"*** folder. A folder with short ***"Videos for Better Understanding of Some Topics"*** is posted on the main course homepage as a valuable additional course resource. Those videos, specifically selected and grouped by main taught topics, provide alternative explanations to lecture material, as well as extra demos and solved problems for practice. **Those videos are optional and not graded.**

To make it easier for you to navigate the multiple course resources and to address some of the student feedback from previous terms, we will post weekly a folder ("**Week X - Direct Links to Course Resources")**, right below the **"Announcements**" area on the main course website**.**

The **Course Schedule** (p. 12) is provided as a guide and will be revised if dictated by prevailing circumstances (*e.g.*, pedagogical purposes, level of students' knowledge, etc.). Any changes (if needed) will be announced ahead of time in class, *via* e-mail, and posted under the ***"Announcements"*** area on the main course website.

3. In-term exams: non-cumulative

Four, 50-min exams are set by the University at 8 AM (to fit the schedule of all enrolled students), on **Wednesdays of weeks 4, 6, 8,** and **10**, as **indicated in the Course Schedule** (p. 12). Each in-term exam will consist of about **25 multiple-choice questions**. **The lowest of the four exam grades will be automatically dropped**. If you miss one exam for any reason, that grade of zero will represent the grade that will be automatically dropped. **The average of the remaining three in-term exams** provides **35% of your final CHEM 101 grade**. If you will miss more than one exam, please contact the course coordinator.

Review sheets and practice questions for each exam will be posted on the course website about one week in advance of each exam. Each exam will cover topics taught **AFTER** the topics included in the review sheets for the previous exam. **Review sessions** will be run and recorded for the whole class a few days before each exam.

Students can enter the exam room 30 minutes prior to the exam starting. Those arriving to the exam room more than 20 min late will not be permitted to take the exam. Students are responsible for bringing their own operational writing instruments and calculators - **no sharing allowed.** We will provide a periodic table, key equations and values of important constants as needed. **No other materials will be allowed.**

It generally takes 2-4 school days for exam grades to be reported back to students.

Active cell phones and the use of any smart devices (*e.g.*, MP3 players, tablets, iPods, smart watches, etc.) are NOT ALLOWED in exam rooms. You MAY NOT use any of those devices as a watch or calculator on exams. You are NOT allowed to use any type of ear- or headphones either. All students must follow proctors' instructions, including specific seating instructions.

4. Final Exam: cumulative

The final exam will be a **2-hour exam** held during final exams week. The date, location and start time will be set by the University around week 5, announced in class, and posted to the course website. The final exam will consist of about **45-50 multiple-choice questions** and represents **20% of your final grade**.

All rules mentioned in section 3 apply to the final exam, too. There is NO MAKE UP FOR THE FINAL EXAM. Students MUST be present for the final.

Final Exam Week: Mon, Dec. 9 – Sat, Dec. 14. Students should expect to be at Drexel the entire week. The final exam will NOT be rescheduled to accommodate travel plans.

5. Recitation:

Mandatory weekly recitations are organized to mimic brainstorming sessions in which a team (you and your classmates) led by a more experienced manager (your instructor) is expected to collaborate and creatively solve problems by "connecting the dots".

As indicated in the **blue rows** in the **Course Schedule** (p. 12), **you are assigned weekly a set of questions** to be discussed in recitation. Recitation worksheets with the text of those problems will be posted weekly on the recitation website by your recitation instructor. The concepts needed to solve each problem will also be posted below each problem listed. **Before attending your recitation class, you should think of how each listed concept could be used to solve the corresponding problem.** You are **NOT** required to fully solve the problems, but you will be graded on class participation in discussing the steps required to solve each problem. You will discuss the recitation problems together with your instructor. **Some of the recitation problems will be solved in class fully, while for other problems only the problem-solving strategy will be discussed.** Your instructor will post a detailed, complete **"Answer Key"** for the weekly recitation

assignment **after each recitation**. You are strongly recommended to use the provided recitation **"Answer Keys"** to prepare for exams. Each exam may contain questions that directly relate to at least 1-2 recitation questions. **Some exams questions will specifically ask to correctly identify concepts or types of problem-solving strategies.**

You will receive a **weekly recitation grade out of 100 points: 50 points for recitation attendance** and **up to 50 points for participation** in class discussions. All recitation questions from week 1 refer to material that you may have seen previously, so students are expected to participate during their first recitation class.

According to the CHEM 101 grading structure (see table on p. 4), the average of all your recitation grades will provide up to 10 points of your final CHEM 101 score.

Each missed recitation will translate into some lost points from your final recitation grade, which in turn will mean some small % lost from your final CHEM 101 grade. If you cannot attend your regularly scheduled recitation, to earn credit for that week, you **must** attend another recitation **that very same week**. **You MUST inform your regular instructor that you attended another recitation. You are NOT required to inform the course coordinator about your make-ups. You may make up for credit only 3 recitations during the term.** You are welcome to attend multiple recitation sections if you wish, but not for credit.

To find the schedule for all recitation sections, access the Drexel Term Master Schedule (TMS) at:

https://termmasterschedule.drexel.edu/webtms_du/app

select the current term in the middle of the page, then **"Arts and Sciences"** on the left menu bar, and then **"Chemistry"** in the center box. A list of chemistry courses will then be displayed, with CHEM 101 recitations coming first in the list. Once you choose a recitation section to attend, let the corresponding instructor know. A file with contact information for all CHEM 101 instructors will be posted on the main course homepage.

Scheduling Note: For recitations that cannot meet on **Mon, Oct. 14 (University Holiday)** and **Tue, Nov. 5 (Election Day)**, students are encouraged to attend a different recitation class that week but will not lose the attendance and participation points if they don't.

6. Laboratories:

Required laboratory activities supplement the course material by offering you training in basic experimental techniques, as well as in recording, analyzing, and reporting of experimental results. Some lab content is a direct application of lecture content, while some other lab experiments teach additional content. **Some exam questions may refer directly to lab content.**

There will be NO CHEM 101 labs during the first week of the term, even if your lab section appears listed in your lab schedule. **DO NOT go to CHEM 101 labs during the first week, even if the schedule that you see on your electronic devices indicates that you should.**

You will have a chemistry lab every other week, beginning week 2 for even-numbered lab sections (*e.g.*, 064, 128, etc.) OR week 3 for odd-numbered lab sections (*e.g.*, 067, 87H, 123, etc.) (see the **Laboratory Schedule** below).

Laboratory Schedule: Disque Hall (see *Notes below for exceptions)

	Lab 1	**Lab 2**	**Lab 3**	**Lab 4**
Title	Exp. #1 Spectroscopy	Exp. #2 Conductivity of Solutions	Exp. #3 Determination of Molar Mass by Freezing Point Depression	Exp. #4 Stoichiometry and Limiting Reagents
Even-Number Lab Sections (*e.g.*, 064, 128, etc.)	Week of September 30	**Week of October 14***	**Week of October 28***	Week of November 11
Odd-Number Lab Sections (*e.g.*, 067, 87H, etc.)	Week of October 7	**Week of October 21***	**Week of November 4***	Week of November 18

***Notes:** Labs for sections **064, 066, 082, and 124 will NOT run on Mon, Oct. 14** (University holiday). These labs will instead run on the **FOLLOWING Mon, Oct. 21, at the same time as the originally scheduled labs.**
Labs for sections **073, 075, 077, and 85H will NOT run on Tue, Nov. 5** (Election Day). These labs will instead run on the **PREVIOUS Tue, Oct. 29, at the same time as the originally scheduled labs.**
The lab rooms may change and will be announced ahead of time.

Everyone MUST wear a long-sleeved lab coat, safety glasses or goggles, long pants, and closed-toe shoes while in the lab. If you show up without that lab attire, you will not be allowed to enter the lab. Prescription glasses must be covered with safety goggles unless written documentation is provided to the instructor that indicates that the lenses meet or exceed the ANSI Z87 1-1989 standard and are equipped with side shields. Contact lenses are NOT ALLOWED. All students must sign a safety sheet stating that they understand and will abide by this policy prior to being allowed to work in the lab. *If you are more than 5 minutes late to lab, you may NOT be permitted to perform the experiment at that time.*

Before going to your first lab, you must read the *"CHEM 101-102 Lab Equipment Review"* and take an online lab equipment quiz posted on your lab section website. This quiz has unlimited attempts and will represent 5% of your final laboratory grade.

In addition to the lab quiz, you will receive a **grade for each lab experiment**, as follows**:**

A. You are required to submit a **legible, handwritten** procedure **at the beginning of each lab** (worth **5 points** of your lab report grade - see the **"Grading Rubrics"** at the end of each experiment in your lab manual). This procedure should be a **summary** (between half- and one-page long) of the "**Experimental Procedure"** section that is part of each experiment in your lab manual (write the summary of this section as steps or with bullets). If you do not hand in this procedure, you will still be allowed to complete the lab, but you will lose the **5 points** associated with that report component. **Late submissions of the procedure will NOT be accepted.**

The procedure signed by your instructor MUST be included as a picture (jpg file) in your lab report (see the "Instructions for Turnitin Submission" in your lab manual, also posted on the main course homepage in the "Lab" folder).

B. If you do not **always** wear your safety glasses **while in the lab** or fail to meet other safety requirements **AND/OR** if you do not clean the equipment and your workstation at the end of the experiment, you **may lose up to 5 points** from your grade for that experiment. **Your instructor will write down a grade for safety and cleanliness on your data sheet.** Make sure you ask for that grade before the data sheet is signed. That grade is also part of the grading rubrics, and your instructor must use it when grading your lab reports.

C. Data sheets must be signed by the instructor prior to you leaving the lab and may be shared with your lab partner only! Your safety/cleanliness grade must be written on it by your lab instructor. The data sheet is worth 10 points of your lab report grade and MUST be included as a picture (jpg file) in your lab report (see the **"Instructions for Turnitin Submission").**

D. The rest of the 80 points will be given for an ORIGINAL, individual lab report that you must submit using the corresponding link posted on your lab website. Instructions on how to write and submit your lab reports are posted in the lab manual and on the course website in the "Lab" folder (the "Instructions for Turnitin Submission" file in that folder)**.** To write lab reports and receive full credit, **use ALL information** given in the **"Treatment of the Data"** and the **"Laboratory Report"** sections at the end of each experiment in your lab manual, as well as the **"Instructions for Turnitin Submission".**

Lab reports are due one week after you do the experiment, by 11:59 PM of that day. If you have difficulty with the online submission of your lab report, you must contact your lab instructor to work out a solution BEFORE the deadline. **Five points** will be deducted for **each day (including weekends or holidays)** that **the lab report is late.** Lab reports submitted **more than 7 days late** will **NOT** be accepted. Failure to submit the lab report during the 7-day period (weekends or holidays included) will result in not more than 20 points score for that lab report (up to 5 points for the handwritten lab procedure and safety/cleanliness, respectively, and 10 points for the signed data sheet).

If you are retaking CHEM 101, you may be able to use the overall lab grade that you earned during a previous term. You **MUST** e-mail Dr. Lee Hoffman to determine if you are eligible to take advantage of this opportunity.

You may collaborate with your lab partner on calculations. However, you are NOT allowed to copy and paste tables of data or detailed calculation sequences from your lab partner. **Read the "Instructions for Turnitin Submission" from your lab manual (also posted on the main course website in the lab folder) to make sure that you do NOT commit plagiarism.** Make sure you submit your work well in advance of the due date to have time to troubleshoot any issues. Ask your lab instructor for help with writing lab reports, if needed.

If you are retaking the course and were not allowed to transfer your overall lab grade, you must write new and original lab reports.

Any lab reports that are full or partial copies of any other source (lab manual, books, Internet, other students' reports, your own previously written lab reports, etc.) will receive zero (0) points. At the second offense, cases of cheating will also be reported to the College of Arts and Sciences and the University. To avoid plagiarism, once you understand the whole experiment and how you should organize your lab report, simply write it in your own words, without seeking any other sources of inspiration.

Lending your lab report to a classmate or allowing your classmates to copy from your lab report is also considered an academic integrity violation.

Please read the **Academic Honesty and/or Cheating** section further below for more information.

You can make up ONLY ONE experiment during the make-up lab week (see **Course Schedule** - p. 12). The make-up lab day can **ONLY** be used for experiments that were missed, **NOT** to improve a lab grade OR to redo an experiment for which you never submitted a lab report.

The average of the four lab grades must be at least 55% to pass the course.

Academic Honesty and/or Cheating

You are held to the highest expectations and standards regarding honesty in all aspects of the course (taking exams and lab report writing included). Cheating, including misrepresentation of the work of others as your own, and allowing your classmates to copy your work will not be tolerated. Students caught cheating will receive a failing (F) grade for the assignment and/or the course. Cases of cheating will also be reported to the College of Arts and Sciences and the University.

All course materials provided to you (*e.g.*, lecture slides, tests, Answer Keys, exam practice questions, etc.) are the intellectual property of Drexel University, the course instructor, or others. **The dissemination of those materials by any means (*e.g.*, Xerox, Internet posting, material submission to any online learning platform, such as Course Hero, StudyBlue, etc.) is strictly prohibited.** Doing so may be considered a breach of Drexel University policies, including the IT-1 policy found at:

https://drexel.edu/it/about/policies/policies/01-Acceptable-Use/

Such actions will be investigated and addressed as possible academic dishonesty, among other potential violations. Improper use of such materials may also constitute a violation of the University's Code of Conduct found at: **https://drexel.edu/compliance-privacy-audit/compliance/policies/cpo-1/** and will be investigated as such.

Please read, understand, and follow the academic policies on Academic Integrity located at **https://drexel.edu/studentlife/community-standards/code-of-conduct/academic-integrity-policy**

Initial Course Participation

Class attendance is critical to your success as a student. Missing classes may impact your class success and your federal financial aid. All Drexel University faculty are required to assess student course participation. This participation assessment will be reported as YES/NO. The specific means by which student participation is assessed will vary across courses. In CHEM 101, the initial course participation will be reported based on recitation attendance during the first 3 weeks of the term.

Disability Resources

Students who need special accommodations for CHEM 101 due to a disability must submit an **Accommodation Verification Letter (AVL)** that describes in detail the corresponding accommodations requested for the course. AVLs are issued by the Office of Disability Resources (ODR). For additional information, visit the ODR website at **https://drexel.edu/disability-resources** or contact the Office for more information**:** 215-895-1401 or **disability@drexel.edu**.

An issued AVL for CHEM 101 is valid only for the corresponding term of the corresponding Academic Year. Accommodations are not retroactive.

Any student who does NOT submit an AVL is expected to follow the course policies that apply to all students, as outlined in this syllabus. Students who applied for an AVL, yet did not receive it before they would need a given accommodation, are encouraged to let their instructor know about their specific needs and inquire about the possibility to accommodate them pending the issuing of the AVL letter. In such cases, the name of the ODR contact person in charge of issuing their AVL should be provided to the instructor. Due to logistical reasons, AVLs indicating alternative testing conditions that are provided on the day of an exam cannot be implemented. **Once submitted, the AVL letter is valid for ALL subsequent exams, including the final exam.**

If you have a disability that may impact your performance in the course and have not registered with ODR, or if you have an existing AVL that you feel does not meet your needs, please contact Dr. Hoffman at lwh28@drexel.edu ***as soon as possible, so that alternate arrangements may be made for the course.***

Add, Drop and Withdrawal Policies

The course registration adjustment period for adding or dropping courses begins with the opening of a student's time ticket assignment for course registration through Sunday at midnight of week 1:

https://drexel.edu/provost/policies-calendars/policies/course-add-drop

If you add this course after the start of the term, you are responsible for completing ALL the work that you may have missed. If you drop this course by the end of week 1, the course will then be removed from your transcript.

Students may withdraw from a course during the withdrawal period beginning at the end of the course Add/Drop Period through Friday of Week 7. A withdrawal from the course will result in a grade of "W" being reflected on a student's transcript with no impact to the student's term and cumulative grade point average (GPA). **Course withdrawal is not permitted in situations involving academic dishonesty.** A course withdrawal that was processed before a final sanction of academic dishonesty is applied will revert to the grade assigned by the instructor in accordance with the Academic Integrity Policy.

https://drexel.edu/drexelcentral/registration/courses/course-withdraw

Student Resources and Academic Support

https://drexel.edu/coas/academics/student-resources-support/

Incomplete (INC) grade policy

https://drexel.edu/provost/policies-calendars/policies/incomplete_grades

Grade appeals policy

https://drexel.edu/provost/policies-calendars/policies/grade-appeals/

General Recommendations for Effective CHEM 101 Study

From our experience, successful students spend at least 2-3 hours on chemistry for every hour spent in class. However, the exact time of study depends on your previous background and personal style of study. **It is not about how long you study but how EFFECTIVELY you study. It is important that you adopt effective study strategies from the beginning, while keeping pace with assignments and exams.**

We recommend focusing on **gradually completing the homework assignments** associated with each lecture content, preferably AFTER reading the corresponding lecture slides. Focus on the **examples solved in class** and on the **recitation questions/videos**. The more you practice weekly problem-solving, the faster you will be able to get through the easy exam questions, thus having more time to think about the more difficult ones.

AKTIV Chemistry starts with a comprehensive Math Review of basic mathematical knowledge required to be successful in CHEM 101. If you also use the textbook, ***Appendix I - Common Mathematical Operation in Chemistry*** (at the end of the textbook) offers a basic math refresher tutorial in case you need it.

You can find general tips and advice in the ***"How to Study Effectively for and How to Take Multiple Choice Exams"*** document posted in the ***"Lecture Slides"*** folder on the main course homepage.

Manage your **study time** thoughtfully. Leave time for reading, practicing, and reviewing the material, and **reach out to your lecturers** early in the quarter if you run into difficulty with understanding the material. Keep up with reading the lecture slides as soon as possible after lectures, do the associated AKTIV Chemistry questions to apply those concepts, and start reviewing the exam material coverage at least 3-4 days in advance, depending on your background and personal style of learning.

Cramming and pulling all-nighters rarely work for CHEM 101!

Starting week 2, there will be free tutoring (**no appointment necessary**) **(schedule to be announced during the first week of the term).** Tutors will help you ONLY if you first try to solve the questions by yourself.

For specific questions about lab reports, you should contact your lab instructor. For conceptual questions about lecture, recitation, or online homework content, you should contact your lecturer.

We wish you much success for the Fall term '24 at Drexel!

Drexel CHEM 101 Teaching Team

Course Schedule – CHEM 101 – FALL 2024 (read by rows)

Week	Component	Monday	Tuesday	Wednesday	Thursday	Friday
1	Date	9/23/2024	9/24/2024	9/25/2024	9/26/2024	9/27/2024
	Lecture topic	**Ch. E + Appendix I; 1.1** (matter *vs.* energy; SI units of measure; dimensional analysis)			**1.2; 1.5** (matter classification; laws & atomic theory)	
	Recitation	**Read "Recitation" paragraph in the Syllabus. Ch. E: 13, 15, 27, 28(a,d), 59, 110; Honors: 79**				
	Lab	**Read the"Laboratory"paragraph in the Syllabus. NO LAB THIS WEEK.**				
2	Date	9/30/2024	10/1/2024	10/2/2024	10/3/2024	10/4/2024
	Lecture topic	**1.8-1.9** (subatomic particles; isotopes**;** average atomic mass)			**Study Tips: How to Learn More in Less Time** **1.10** (moles; density-mass-moles-particles conversion) **2.2** (electromagnetic waves; photoelectric effect**)**	
	Recitation	**Ch. 1: 37, 40, 48, 52, 64, 66(a,c), 88, 102, 117; Honors: 97, 125**				
	Lab	**Exp. 1 (Spectroscopy), even-numbered sections**				
3	Date	**10/7/2024 (AKTIV deadline)**	10/8/2024	10/9/2024	10/10/2024	10/11/2024
	Lecture topic	**2.3:** Bohr model & atomic spectra			**2.4: ONLY** wave-particle duality e^-**:** e^- diffraction **2.5: ONLY** orbitals as defined by the Quantum-Mechanical Model of the Atom + "Atomic Spectroscopy Explained"	
	Recitation	**Ch. 2: 40c, 46a, 66, 71, 73, 98, 104, 106; Honors: 44**				
	Lab	**Exp. 1 (Spectroscopy), odd-numbered sections**				
4	Date	**10/14/2024 (AKTIV deadline)**	10/15/2024	**EXAM 1 10/16/2024**	10/17/2024	10/18/2024
	Lecture topic	**HOLIDAY 3.1-3.3** (periodic table**;** e^- configuration**;** shielding *vs.* penetration effects)			**3.4-3.5** (core *vs.* valence e^-**;** noble gas notation**;** blocks of elements)	
	Recitation	**Ch. 3: 9, 10, 44, 46, 50, 52, 54, 60, 64; Honors: 66**				
	Lab	**Exp. 2 (Conductivity), even-numbered sections (EXCEPT sections 064, 066, 082, and 124)**				
5	Date	10/21/2024	10/22/2024	10/23/2024	10/24/2024	10/25/2024
	Lecture topic	**3.6-3.7 (**periodic trends based on Z_{eff})			**4.1-4.6; 4.8** (**ONLY** ionic *vs.* covalent bonds**;** formulas type - **NO empirical; NO naming;** molecules *vs.* formula units; mono- *vs.* polyatomic ions; ionic dissociation)	
	Recitation	**Ch. 3: 58, 82, 83, 104; Ch. 4: 34(a,b); Honors: Ch. 3: 105**				
	Lab	**Exp. 2 (Conductivity), odd-numbered sections (PLUS sections 064, 066, 082, and 124)**				
6	Date	**10/28/2024 (AKTIV deadline)**	10/29/2024	**EXAM 2 10/30/2024**	10/31/2024	11/1/2024
	Lecture topic	**4.9-4.10** (molar mass**;** % composition**;** problem- solving) **4.4; 4.7; 5.3** (Lewis structures**:** molecules + polyatomic ions)			**5.4** (resonance structures**;** formal charge)	
	Recitation	**Ch. 4: 40, 42, 44, 74c, 78(a,d), 80(a,c), 84(a,d), 89, 120; Honors: Ch. 4: 122**				
	Lab	**Exp. 3 (Freezing point depression), even-numbered sections (PLUS sections 073, 075, 077, and 85H)**				
7	Date	**11/4/2024 (AKTIV deadline)**	**11/5/2024**	11/6/2024	11/7/2024	11/8/2024
	Lecture topic	**5.5** (exceptions to the octet rule); **HOLIDAY** **5.2; 5.6** (bond polarity**; NO** calculations of % ionic character**;** bond energy, bond length)			**5.7-5.10** (**VSEPR:** electron groups *vs.* molecular geometry**;** bond angle estimation up to 4 e^- pairs; molecular polarity)	
	Recitation	**Ch. 5: 28(a,b,d); 34(b,c); 36(c,d), 46a, 50b, 54, 58(a,b,d), 72; Honors: Ch. 5: 68a**				
	Lab	**Exp. 3 (Freezing point depression), odd-numbered sections (EXCEPT sections 073, 075, 077, and 85H)**				
8	Date	**11/11/2024 (AKTIV deadline)**	11/12/2024	**EXAM 3 11/13/2024**	11/14/2024	11/15/2024
	Lecture topic	**7.2-7.3** (physical *vs.* chemical changes; balancing chemical equations**;** stoichiometry)			**7.4-7.5** (limiting and excess reagent**;** yield) **8.2-8.3** (M**;** solution stoichiometry)	
	Recitation	**Ch. 7: 20, 28, 34, 38(a,b), 42; 49(a,c), 51, 59; Ch. 8: 23c, 27, 29; Honors: Ch. 8: 33**				
	Lab	**Exp. 4 (Stoichiometry), even-numbered sections**				
9	Date	**11/18/2024 (AKTIV deadline)**	11/19/2024	11/20/2024	11/21/2024	11/22/2024
	Lecture topic	**9.1-9.4** (heat & work**;** problem-solving; **NO pΔV calc.**)			**9.5-9.9** (methods to calculate ΔH: based on calorimetry, stoichiometry, Hess's Law, bond energy)	
	Recitation	**Ch. 9: 38, 40; 44c, 53, 60, 68, 69, 76, 78; Honors: 139**				
	Lab	**Exp. 4 (Stoichiometry), odd-numbered sections**				
		11/25/2024 (AKTIV deadline)	11/26/2024	11/27/2024	11/28/2024	11/29/2024
		Thanksgiving break NO CHEM 101 CLASSES MONDAY-FRIDAY				
10	Date	**12/2/2024 (AKTIV deadline)**	12/3/2024	**EXAM 4 12/4/2024**	12/5/2024	12/6/2024
	Lecture Topic	**10.2-10.5** (KMT**;** pressure**;** gas laws)			**10.6-10.7; 10.10** (partial pressure**;** problem-solving)	
	Recitation	**Ch. 10: 26(a,b,d), 30, 34, 36, 44, 58, 65, 85; Honors: 107**				
	Lab	**MAKE UP LAB: Tue (12/3) and Wed (12/4) - room TBA**				
11		**12/8/2024 (AKTIV deadline) SUNDAY**	**FINAL EXAM WEEK: Mon, 12/9-Sat, 12/14**			