

CHEM&110 Fall 2026

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Chemical Concepts w/Lab- CHEM&110 30623-FA26 | 5 Units

Dates of quarter – 9/21/26 to 12/11/26

Canvas Class Direct Link : [Fall 2026 CHEM110 Canvas Page](#)

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Professor Information

Professor Information

dmcadams@tacomacc.edu

Fall 2025 Student Service Hours: In the MESA Center First Floor Building 15

Mon 9:30-10:30pm Thurs: 11:30-12:30 pm

Or by appointment in-person or on Zoom

Welcome Message

Welcome to CHEM110! I am looking forward to guiding your introduction to the wild and diverse world of chemistry this quarter. Throughout my life I have always had a passion for science and science education. A little about me, I earned a bachelor's degree in Chemistry at Linfield College (in Oregon) and a PhD in Analytical Chemistry at the University of Colorado in Boulder, where I worked to develop an inhalable vaccine for Measles. I have conducted scientific research in a broad range of areas including environmental chemistry, biochemical and chemical analysis and pharmaceutical and vaccine development and would be happy to share my research experience with you if you are interested.

This quarter I hope to provide you with a good introduction to chemistry (and laboratory science in general). I know that you may come from a diverse set of educational backgrounds and that my students may have a broad range of comfort with the communication and application of math and science so I hope to provide you with easy to understand examples and instruction. If any of the examples or a questions that I use during this course are confusing or just don't "click" you are probably not alone, so please feel free to contact me and I will look for another way to communicate the concept. I hope we can work together in this virtual environment to meet and exceed your educational goals and to encourage a feeling of scientific curiosity.

Communication Policy

Please feel free to contact me by email or during my office hours. The messaging function through Canvas is probably the best as it will indicate your section and be highlighted in my inbox. You can email me at any time, but you may not receive a response outside regular business hours. Generally, emails received before 5:30 p.m. will receive a response before 6 p.m., and emails received after 5:30 p.m. will receive a response on the following business day. Business days are Monday–Friday, except for holidays.

Please set Canvas so that it sends you a message when I make a comment on your work. To do this, go to Canvas>Account>Notifications>Course Activities>Submission Comments. Click on the check mark for immediate notification to your home email or text, depending on what you prefer. You may also want to take a look at the other possible notifications and see what you would like to receive.

General Class Information

Class Information

Chemical Concepts w/Lab-CHEM&110 30623 -FA26

Course Modality

in-person: In-person Lectures on M,Tu,We,Th with Labs on Fr

Schedule and Location

Lecture bldg. 15 room 301, M,Tu,We,Th : 8:30-9:20 am

Lab bldg. 15 room L324L, Fri: 8:30-10:20 am

Catalog Description

Survey of the fundamental principles of chemistry in a relatively non-mathematical way. Course utilizes themes such as food, the environment, and the global economy. Course covers measurement, atomic and molecular structure, chemical reactions, and applications of chemistry to everyday life. Laboratory included.

Textbooks & Supplemental Materials

Introductory Chemistry -1st Canadian Edition Open access: [Link to CHEM110 Textbook](#)

A bound Lab notebook

Technology Required

This is a web-enhanced course meaning that our course materials are available online via Canvas. You will need regular access to a computer and internet. Some assignments can be completed on your phone but others will be easier if done from a desktop, laptop, or tablet. If you need support using technology or learning how to use Canvas, please visit the Information Commons in Building 16 on the first floor at the end of the hallway.

Canvas

Canvas, accessible directly or through your TCC Portal, will be the main mode of instruction for this course. Please check your TCC and Canvas emails at least once per day.

Learning Outcomes

Degree Learning Outcomes for Tacoma Community College can be found at <http://www.tacomacc.edu/abouttcc/missionvisionandstrategicplan>

Program Learning Outcomes

Upon successful completion of the Natural Sciences distribution requirements for the AAS Option A or B or the Associate of Sciences degrees, students will:

1. Evaluate information scientifically in the context of their own lives.
2. Explain the importance of observation and hypothesis testing in the scientific process, and distinguish between the scientific process and other human endeavors.
3. Communicate the primary principles and processes underlying at least one natural system (for example: atoms and molecules, cells and organisms, the oceans and atmosphere, the solid earth, or the cosmos).
4. Perform and effectively communicate the results of scientific investigations, and explain how research is done in science.
5. Demonstrate the safe and proper use of scientific instrumentation, measuring devices, chemical reagents, media, and/or tools of science in a laboratory or field setting relevant to specific disciplines of science.

Course Learning Outcomes

Upon successful completion of this course, the student should be able to:

1. Work safely in the laboratory and demonstrate the basics of safe chemical use and disposal. (PLO: 4, 5)
2. Collect and analyze experimental data. (PLO: 4, 5)
3. Work as a member of a team to perform chemistry experiments and to present the results. (PLO: 4, 5)
4. Relate classroom and laboratory experiences to phenomena outside the classroom. (PLO: 1, 5)
5. Describe the process of science. (PLO: 2)
6. Communicate and interpret chemical processes using descriptions and symbols. (PLO: 3)
7. Describe the characteristics of solids, liquids, and gases in terms of visible properties and the kinetic-molecular theory of matter, and compare pure substances to mixtures. (PLO: 3)
8. Describe how the nanoscopic properties of matter results in observable macroscopic properties. (PLO: 3)
9. Identify the role of chemistry and chemical reactions in modern society using examples such as pollution, cooking, industrial synthesis, global economy, pharmaceuticals, and current events. (PLO: 3)

Instructional Methods Used

Class Lecture

Lectures will be in-person and some additional video lectures will be posted in Canvas. It is recommended that you **take notes During Lecture**. Study guides to help organize the topics will be provided for each chapter/section.

Lecture Quizzes

Periodically there will be some small quizzes pertaining to the lecture material.

Reading

Previewing the textbook figures before each class, then reading more thoroughly after class is very helpful. You will be expected to read the required reading sections outlined in the module study guide in full by the end of the module. The textbook also has many in-chapter and end-of-chapter worked out problems, with selected answers in the back.

Worksheets

Practice worksheets will be provided digitally for certain topics.

Homework

Required homework will be assigned and posted through Canvas.

Laboratory

You will be required to collect data and perform experiments during the lab session. A prelab hand out will be posted on Canvas and provided during lab. You must complete the Prelab assignment prior to Lab. All data, notes and observations should be recorded in your lab notebook. Post lab reports will be assigned and will be submitted through Canvas.

Attendance will be taken at each and every lab. Labs missed for valid reasons may be made up at the instructor's discretion, subject to the availability of space, time, and materials. You are responsible for arranging a make-up lab with the instructor.

If you miss a lab without instructor approval, you will get a zero for that lab. More than one missed lab, in addition to scoring zeros, may reduce the maximum possible letter grade that you can earn for the course, as follows:

Missed labs: 2 3 4 5

Highest possible grade: B C D E

Tardiness to lab will also be penalized as follows. If you are 11 minutes late to a lab session, you have essentially missed 10% of the lab session. You will lose 10% of the possible points available for that lab. A separate handout will be provided regarding how labs are scored and how the lab notebook will be utilized.

All students must follow the chemistry lab safety procedures and standard operating procedures established by Tacoma Community College, the Science and Engineering Department, and the instructor. Students who repeatedly or willfully violate these procedures may face sanctions, including removal from the course, a failing grade, and referral to the college for action under the Code of Student Rights and Responsibilities.

Exams

There are two regular exams and one final exam for this course. Exams will be conducted in person during our scheduled Lecture time.

Exam 1	Thursday Oct 22 th
Exam 2	Thursday November 12 th
Final Exam	Wednesday December 9 th 8:00-10:00 am

In general there are **no make-up exams**. Medical emergencies, military deployment, and other special circumstances will be handled on a case-by-case basis

Professor and Student Expectations

Chosen Names and Pronouns

Everyone has the right to be addressed by the name and pronouns that correspond to their gender identity. Class rosters don't list gender or pronouns, so you may be asked to indicate the pronouns you use so that I don't make assumptions based on your name and/or appearance/self-presentation. However, you are not obligated to share your pronouns. If you use a chosen name, please let me know. Chosen names and pronouns are to be respected at all times in the classroom. Mistakes in addressing one another may happen, so I encourage an environment of seriousness and openness to correction and learning. Thank you.

Professor Expectations

As your professor, we will work to create an atmosphere that will encourage and support your mastery of course concepts. As such, objectives for which I will strive to meet include to:

- Get to know you and what your goals are for this class.
- Meet with you individually at least one time during the quarter.
- Maintain a safe and supportive learning environment.
- Administer fair and equitable policies and procedures to all students.
- Provide a schedule of activities that is clear and communicate changes by email and on Canvas.
- Grade assignments, quizzes, etc. within one week after the stated due date.
- Grade projects (if assigned) and hand them back to students in class no later than one week after the stated due date.
- Answer email within two business days.
- Provide feedback and comments that are thorough and meaningful.
- Be available for students during my office hours and by appointment and inform students of any changes to my office hours by email and Canvas.
- Equip students with general skills applicable to multiple career paths.

Student Expectations

- **Complete Required Reading:** In this course the lectures, labs and assignments are designed to support the concepts presented in the required reading presented in each module study guide. The best way to thrive in this course is to thoroughly review the reading and support it by viewing the lectures.
- **Engage with Course Materials:** Because this is a online only class there will be no attendance function but I will expect you to view the posted lectures and review the material for each module. You will be expected to complete posted assignments and quizzes before the

deadlines. Please try to keep up with the pace of this course as the concepts are cumulative and it may be easy to fall behind in the comprehension of course topics.

- **Check Canvas:** Assignments and other assessments are in Canvas. Check Canvas at least three times per week to ensure you complete work on time and understand instructions.
- **Respect others:** Behave with respect toward each other including other students and your professor. Refrain from profane language or inappropriate/unrelated remarks. Refrain from wearing strong perfumes or colognes – this is a scent-free class.
- **Communicate with me:** Keep me updated of any circumstances that will not allow you to complete your work on time. I am here to help you learn and can be flexible if something unexpected comes up in your life.
- **Self-Advocacy:** Seek our resources you need to be successful. There are many resources available to help you succeed at TCC, for example the Writing and Tutoring Center, Access Services, and Counseling. Use the Student Resources Canvas page to access these resources and more.

If there is a concern with your behavior during this quarter, we will use the Student Code of Conduct to frame our discussion. For more information on TCC policies related to student behavior, please refer to the [TCC Classroom Standards and Culture](#) webpage.

TCC Student Policies

TCC works hard to create a vibrant learning culture where you can succeed. Please refer to the [college-wide standards and policies](#) that support this important work. Some of these policies include Religious Accommodations, Withdraw/Retakes, and the Student Code of Conduct.

Class Policies and Procedures

- **Attendance:** Attendance is not tracked in Lecture but is required for Lab. There are certain in-class activities and group quizzes that you can only get points for if you are present.
- **Due Dates:** All assignments are due by 11:59pm the day of the due date, unless otherwise listed on Canvas.
- **Late work:** Late work is accepted within the same unit. For example, if you miss a Chapter Review, you can still turn it in up to the test on that particular chapter.
- **Cell phones & other electronic devices:** Use of these devices are permitted and encouraged during class. You may be asked to quickly find a fact or confirm information so please bring them with you. If you need to take a phone call or use your phone for a non-class purpose, please leave the room temporarily so that your screen does not distract others.
- **Children in class:** By college policy, children are only permitted in the classroom if approved by the instructor. Please talk to me if you need to bring your child to class so that we can ensure a positive learning environment for the class.
- **Food/beverages in class:** No open drinks or aromatic foods, please. This will be handled on a case-by-case basis to keep our classroom comfortable for everyone.
- **Group work:** Group work is an essential part of this class. Please talk to me if you have any concerns or reservations about working in groups during and outside of class time so we can discuss strategies to help you succeed.
- **Suspended operations:** In the event of the campus closing due to inclement weather, a power outage, or another unexpected event, please check your Canvas messages for updates on how we will adjust our course schedule. You may be asked to watch videos in place of in-class time or complete an additional assignment to stay on schedule. In the event you are unable to access Canvas via the Portal, please use this direct link: [Fall 2026 CHEM110 Canvas Page](#)

Classroom Concerns/Disputes/Final Grade Appeal Process

If you have questions or concerns about this class, please talk to me about them. If we are unable to resolve your concerns, you may talk next with the Chair, Kim Davidson (kdavidson@tacomacc.edu). Kim

can assist with information about additional steps, if needed. If you think that your final grade has been given in error, please see the [final grade appeal process](#).

Academic Dishonesty

TCC Students are expected to be honest and forthright in their academic endeavors. Academic dishonesty is inconsistent with the values and mission of Tacoma Community College. You are encouraged to seek out help while learning chemistry. All work that you submit must be your own original work. This includes quizzes, homework, labs, and exams. Explicit copying someone else's work or submitting theirs as your own is dishonest and constitutes "plagiarism." While online chat groups are a great way to discuss the course material with your classmates, you should not use these to get specific answers to your assignments and any posted discussion of the material on an exam while it is being administered will not be tolerated. Cheating, plagiarism, and other forms of academic dishonesty are violations of the Code of Student Conduct. Sanctions for acts of academic dishonesty committed in this course are as follows: Any incident of academic dishonesty will be recorded in your college record, will result in a zero on that assignment, and possibly a failing course grade. As stated in the TCC Catalog, "Students are expected to be honest and forthright in their academic endeavors. Cheating, plagiarism, fabrication or other forms of academic dishonesty corrupt the learning process and threaten the educational environment for all students." The complete Administrative Procedure for Academic Dishonesty is available on the [TCC website](#).

While I encourage the use of AI for the purposes of learning, I expect that you will only present **your own work** and I will treat labs, assignments and quizzes copied directly from AI sources as an example of academic dishonesty.

Graded Items

Assessment Structure

Focus on learning instead of just accumulating points. Grades are earned, not given, and are meant to reflect what you have learned and are able to demonstrate. I will try and grade assignments in a timely fashion but you should not expect the points for all assignments to be immediately posted throughout the course. You should be able to look back at the points I have taken off and my comments to help better understand the concepts. Most questions in the homework are likely to show up again in the exams.

The graded items for this course will be divided into 6 categories, and each will be weighted differently for your final grade as described in the table below. I like to think of the study of science as constructing a scaffolding of concepts, where more advanced concepts are built on the foundation of basic concepts. This being said, all work in this course will be cumulative and you will be expected to apply the concepts learned earlier in the course throughout.

Quizzes	20 %
Homework	25 %
Labs	20 %
Exam 1	10 %
Exam 2	10 %
<u>Final Exam</u>	<u>15 %</u>
TOTAL	100 %

Grading

Grades will be posted to Canvas as soon as assignments are graded, usually within two business days. If you think there has been an error, see me as soon as possible to have it corrected. If you need assistance accessing your Canvas account, please ask for help at the Information Commons in Building 16 or review the Canvas module in our Canvas course. Final grades will be assigned using the following scale:

Table 2: Grading

Grade	Percent
A	93 to 100%
A-	90 to 92%
B+	87 to 89%
B	83 to 86%
B-	80 to 82%
C+	77 to 79%
C	73 to 76%
C-	70 to 72%
D+	67 to 69%
D	65 to 66%
E	64% and below

Graded Item Submission Guidelines

Assignments will be posted with due dates on Canvas. Some assignments will be posted as online quizzes and some will require you to write out your answers and send me a digital copy of your work. For these assignments I will post a PDF or doc file to Canvas which you can download and print to fill out. If you do not have access to a printer you may write out the questions and your answers on a separate sheet of paper. To submit your assignment, please scan or take a picture of each page of your work and submit the file as a jpg or pdf. If I cannot read your file, I cannot grade your work.

Late Work

I have blocked out times in my schedule for grading your work so that I can give you feedback while the work is still fresh in your minds. Any late work is eligible to receive up to 10% of the points possible if it is submitted within the same module it was assigned. For example, if you miss an online assignment before the first test during Module 1, you can submit that assignment for up to half points until the due date of next exam.

Student Resources

During this quarter, you may encounter a need that goes beyond this class that affects your academic performance. We are here to help you be successful. You have access to great resources on campus and people ready to support you. Login to Canvas and access the [Student Resources](#) course to learn about some of these excellent resources.

Access and Accommodations

Access Services coordinates reasonable accommodations for students with disabilities.

If you have established disability accommodations with the Access Services office, please share your approved accommodations to me at your earliest convenience. You can request that Access Services email your Letter of Accommodation to me, or you can provide me with printed copies.

If you have a disability or health condition and have not established services, please contact Access Services at (360) 504-6357 (call or text) or email access@tacomacc.edu.

* Please note that accommodations are not retroactive, which means they begin the day that your accommodation letter is sent to me, so please work with Access Services accordingly.

Safety

We care about the safety of our campus and community and all of us are needed in order to create a safe and secure learning environment. Please review the full list of safety resources available to you, which are listed on our [TCC Ready website](#). Additionally, please watch [this brief video](#) to familiarize yourself with our general safety practices. Please **program the Public Safety number into your cell phone (253-566-5111)** or 5111 from any campus phone (If this number is inoperable due to an emergency, dial **253-495-4146**) and [sign up for TCC Alerts!](#) to receive emergency notifications to your cell phone.

In the event of an emergency, refer to the Emergency Procedures flipchart located near the door of every classroom. This quarter, we are located in Building 15, Room 304. Our nearest exits are to the [left] after exiting the room. Please review the [campus map](#) in order to orient yourself to where we are on campus. In the event of an emergency where we need to evacuate, please follow my instructions to safely direct us to a safe and secure location on campus.

COVID-19 Safety

The CDC has updated its long-standing recommendations for COVID isolation, mask wearing, and testing. This decision has been made due the endemic status of COVID-19 as the results of growing herd immunity, availability of vaccines, and medical advancements to treat this virus have proven effective long-term. As we have always done with COVID-19, TCC continues to adhere to the standards that are proposed by the CDC.

If You Test Positive For COVID-19:

- Do not come to campus if you have symptoms, especially a fever of 100.4 or greater.
- Contact TCC's COVID Coordinator to inform any identified close contacts via bkilgore@tacomacc.edu or 253-460-4480.
- When identified, COVID close contacts will be notified and advised on best practices.
- You can return to campus when, for at least 24 hours, your symptoms have mostly resolved, and you have not had a fever of 100.4 or greater (and are not using fever-reducing medications).
- Upon your campus return, practice preventative steps for 5 days including mask wearing, physical distancing, good personal hygiene, and keep your work area sanitized to the best of your ability.

Besides these guidelines, Campus Safety recommends staying up to date on your vaccinations. If you have questions about the new guidelines, please contact [Campus Safety](#) or [Brandon Kilgore](#).

Reasonable accommodations for religion/conscience

Reasonable Accommodations for Religion/Conscience: Students who will be absent from course activities due to reasons of faith or conscience may seek reasonable accommodations so that grades are not impacted. Such requests must be made within the first two weeks of the quarter and should follow the procedures listed in the [Leave for Faith & Conscience policy webpage](#).

Tentative Class Schedule

Course Outline (approximate dates)

9/22 to 9/29 Intro and Chapter 1

10/02 to 10/06 Chapter 2

10/9 to 10/13 Chapter 3

10/16 to 10/ 20 Chapter 4

10/23 to 10/27 Chapter 9

10/30 to 11/3 Chapter 10

11/6 to 11/10 Chapter 11

11/13 to 11/17 Chapter 7

11/20 to 12/01 Chapter 14

12/4 to 12/9 Chapter 16

Syllabus Subject to Change

Please note: This syllabus is subject to change. Students will be notified of any changes as soon as possible using multiple means of communication. Please check Canvas for the most updated schedule and assignment list during the quarter.