



## Walters State Community College Course Syllabus

### Course Information

**Course Number and Name:** CHEM 1110 General Chemistry I

**Section ID:** 80844.202380

**Semester and Year:** Fall 2023

**Credit Hours:** 3

**Start Date:** August 21, 2023

**End Date:** December 08, 2023

**Course Format:** CON - Conventional Methodology

**Catalog Course Description:** General Chemistry I is a study of fundamental concepts and properties of selected elements and compounds. Topics covered are: tools of chemistry; atoms, molecules and ions; chemical reactions I: chemical equations and reactions in aqueous solutions; chemical reactions II: chemical calculations/stoichiometry; the gaseous state; thermochemistry; quantum theory and the electronic structure of atoms; periodic relationships among the elements; chemical bonding I: basic concepts; chemical bonding II: molecular geometry. Molecular orbitals will be covered time permitting. A letter grade of C or better is required to take Chemistry 1120. Pre/Corequisite(s): CHEM 1111, MATH 1030. **F, S, Su.** (T)

**General Education Course Designation:** General Education Course

**Meeting Details:** MW; 08:00AM - 09:25AM; NSCI 205

**Course Drop Deadline:** October 27, 2023

### Instructor Information

**Name:** Lura Johnson

**Office Location:** NSCI 119

**Office Hours:** As posted in eLearn under Office Hours

**Office Phone:** 423-585-6878

**Email:** Lura.Johnson@ws.edu

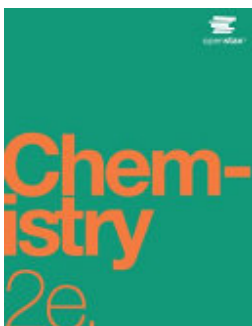
**Supervisor Name:** Dr. Matthew Smith, Dean Natural Science

**Supervisor Phone:** 423-585-6865

**Secretary Name:** Ms. Sherry Woody

**Secretary Phone:** 423-585-6865

## Required Textbook(s) and Materials



### **Chemistry 2e**

**ISBN:** 9781947172623

**Authors:** Paul Flowers, Klaus Theopold, Richard Langley, Edward J. Neth, William R. Robinson

**Publication Date:** 2019-02-14

**Edition:** 2nd

### **Additional Information**

Book can be downloaded at <https://openstax.org/details/books/chemistry-2e>

## Supplemental or Optional Materials

All required homework, pre-tests, and post-tests can be accessed through eLearn.

## Student Learning Outcomes/Objectives

- Students will be able to communicate skills related to the following topics:
  1. **Tools of Chemistry** – demonstrate fundamental math skills related to concepts such as the metric system, dimensional analysis, significant figures, scientific notation, density, etc.
  2. **Atoms, Molecules, and Ions** – explain the fundamental aspects of atomic and molecular structure, demonstrate the capacity to name and write formulas for compounds, utilize the periodic table, demonstrate an understanding of matter, properties, and changes, etc.
  3. **Chemical Calculations** – apply Avogadro's number and molar mass to determine chemical quantities, calculate elemental composition, deduce empirical and molecular formulas from data, describe molar ratios, solve basic fundamental stoichiometry problems, etc.
  4. **The Gaseous State** – describe the relationships between pressure, volume, temperature and quantity using the combined and ideal gas laws, explain the diffusion and effusion of gases, discuss the aspects of the Kinetic Molecular Theory, perform stoichiometric calculations involving gases, describe the behavior of gaseous mixtures, etc.

5. **Solution Chemistry** – calculate and use Molarity and percent by mass or volume in stoichiometric/titration problems, explain how to perform a dilution of a concentrated solution, classify a compound as a strong/weak/non-electrolyte and explain how this relates to the net ionic equation, etc.
6. **Thermochemistry** – discuss endothermic and exothermic processes from a qualitative and quantitative standpoint, calculate enthalpy using Hess's Law and standard enthalpies of formation, perform various calculations involving specific heat, etc.
7. **Quantum Theory and Electronic Structure** – discuss the relationships between frequency, wavelength, and energy, explain the fundamental concepts of quantum mechanics, use the periodic table to determine the electron configuration of an element, describe atomic orbitals in terms of energy and shape, etc.
8. **Periodic Relationships Among the Elements** – describe the trends of ionization energy, electronegativity, atomic radii, etc. in terms of the periodic table
9. **Chemical Bonding** – explain the difference between ionic, covalent, and metallic bonds, explain bond polarity in terms of electronegativity, use VSEPR theory to deduce theoretical geometry, observed geometry, and molecular polarity, generate plausible Lewis Structures based upon valence bonding theory, calculate formal charge, explain the stabilizing implications of resonance, etc.

## Instructional Approach and Methods

Lectures and discussions: You are expected to attend class, pay attention, and participate actively in discussions by answering questions, asking questions, and making comments. You will get more out of the lecture if you have read the material in the textbook ahead of time. You may always bring your book with you to lecture, but notes are necessary and can be downloaded through eLearn. Learning Outcomes for students can be found in the Walters State eLearn for this course and the chemistry section of the Natural Science homepage (<http://library.ws.edu/mChemistry>), Lecture Notes used in lecture are available for your review on the Walters State eLearn page for this course.

Reading: The textbook provides a good general introduction to the field of Chemistry. Most of the topics that are approached in the class are covered by the book. Thus, it will serve to augment lecture and to provide material for discussion. In addition, readings in the book will support the material that you will be studying in labs. The book includes many things which will help you understand the material and study for the tests, including a list of key concepts, chapter summaries, review questions, quizzes, and a list of key terms.

### Expectations:

Satisfactory performance in college courses generally asks for two hours of study outside of class for each hour in class. This estimate applies to an "average" student expecting an "adequate (C)" grade. Students aiming higher or those with academic problems should expect to spend more effort than the minimum. Should you procrastinate, not read ahead of time, or expect to cram everything on last days before exams this course may not be for you.

**The Student Can Expect from the teacher:**

1. Email response within 24 hours during the normal work week. Holidays and vacations excluded. Please use the following email: [lura.johnson@ws.edu](mailto:lura.johnson@ws.edu) outside of eLearn for a quicker response.
2. Email during the weekend will be answered on Monday.
3. Exams to be graded and returned in a timely manner.
4. Enthusiasm for the subject and encouragement to help you when you need it.
5. A fair grading system, with feedback.
6. Learning that ties concepts into the real world around us.
7. Respect for you as a learner.

## Assessment, Evaluation and Testing Procedures

Chemistry exams will emphasize factual knowledge and assess the achievement of the Learning Outcomes. Short answer, essay questions, diagrams and multiple-choice questions may be used. Exams focus on what happens in class as supplemented and amplified by the readings and notes. Exam structure is currently all multiple choice but may vary depending on needs that arise. All lecture exams are currently multiple choice and will be administered in-person.

Assignments and exams may be given in class or online via d2L/eLearn. For those administered online through d2L/eLearn, students may be required to use a virtual proctoring program like Respondus Lockdown Browser with Monitor. Virtual proctoring programs will require a compatible device, microphone, and webcam. In the event that the student does not use the specified requirements for the entire assignment or exam is not completely proctored, this could result in a grade of zero "0" for the assignment or exam. Students will be provided specific testing procedure and assignment completion information directly from the instructor.

**Evaluation:**

Homework, Pre-tests and Post-tests = 10%

Exams = 65%

Comprehensive Final Exam = 25%

### Academic Dishonesty Policy:

Any student who violates the college's academic integrity policy will automatically receive a "0" for that assignment or exam.

### Missed Exam Policy:

Students who are absent on the day of an exam must provide a **documentable excuse** before a make-up exam will be given. The missed exam must be made up before the next lecture exam.

## Grading Scale

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	Below 60%

The percentile distribution is a guarantee for letter grade assignments. A student will not receive a letter grade lower than what this ranking indicates for his/her earned lecture average. However, the professor reserves the right to favorably adjust letter grade assignments to fit natural breaks and distributions. If one desires a specific letter grade in this course, he/she should rely on the percentile rank and not a grade adjustment.

## Assignments

### EXTRA CREDIT:

*Each professor has the option to offer the opportunity to earn up to **40** additional points through the semester. Examples include, but are not limited to, bonus questions on exams, **in class quizzes, in class participation, attending tutoring/office hours**, or attending a scientific event, etc. The instructor's policy will be explained in detail on the first day of class. In no instance will credit be provided for any activity not related to the scope of the course. The aim of the class is to get a solid understanding of chemistry so that grades reflect our abilities to communicate the material and not a supplementary assignment or task. All students, especially those that feel they are struggling with the material, are strongly encouraged to use office hours, send emails, make appointments for extra help, etc. throughout the semester.*

## Class Participation

Each student is expected to participate in class.

## Course and Class Policies/Procedures

STAY AWAKE IN CLASS. Your mere presence in class is not sufficient—you must be able to actively process the information presented! Sleeping in class is disruptive in two ways: the student who is snoozing is not interested and not participating in the classroom discussion; secondly, sleeping in class is considered to be disrespectful to the teacher and other students. The penalty for sleeping in class may range from the student being requested to leave the class with a following conference with the instructor, to notification of the Vice-President of Academic Affairs (in the cases of habitual sleepers). If you have a medical condition that prevents you from staying awake in class, please discuss this with the instructor.

CLASSROOM COURTESY. Being in a college environment it is **expected** that classroom courtesy will be given to your instructor and classmates in limiting unnecessary talking and communication during class lecture or student presentation. An academic misconduct form will be completed and filed for those who have difficulty following this policy and disrupt class.

## Online/Web-Enhanced Course Supplementary Information

Virtual Office Hours	Information provided on eLearn
Library Information	Library Phone: 423-585-6903 <a href="#">WSCC Library Website (opens in new window)</a>
Technical Support	Helpdesk Phone: 423-318-2742 <a href="#">WSCC Helpdesk Website (opens in new window)</a> <a href="http://helpdesk.ws.edu/">http://helpdesk.ws.edu/</a>
Web Resources/Addresses	<b>Microsoft Teams</b> will be used in lieu of in-person classes <b>only if necessary</b> . See eLearn for more information and be present on the first day of class for set-up.
Guidelines for Communication: Email, Discussion Posts, Chat	Refer to eLearn

## Additional Course Requirements/Details/Information

## Course Specific Details:

This syllabus sets forth the expectations for the course content, work, and grading as well as expectations for student performance and conduct. The syllabus does not constitute a contract between the student and the instructor or the College. The information contained here is subject to change at any time. Instructor reserves the right to modify this syllabus at any time with written notification to the students. Though changes are possible, it is expected that the course will be conducted as described in this syllabus.

## Course Ground Rules and College Policies:

All students attending Walters State Community College, regardless of the time, location, or format of the class, must abide by the rules and regulations outlined in the current Walters State Catalog/Student Handbook and the current Walters State Timetable of Classes.

## Academic Honesty

Faculty expect all students to refrain from acts of academic misconduct including but not limited to:

1. Plagiarism - refers to using another person's ideas or writing without giving proper credit to the original source. Indulging in this type of conduct will subject the student to disciplinary sanctions, which may be imposed through the regular institutional procedures of Walters State Community College as outlined in the Student Handbook. Plagiarism will result in a grade of "0" for the paper/exam/presentation. Student Conduct and Disciplinary Sanctions contained in the college Catalog/Student Handbook apply (see policy 04:18:02 Disciplinary Sanctions). Plagiarism includes, but is not limited to the following:
  - a. Using cut/paste tool from original document with no references given.
  - b. Copying another student's work and submitting it as one's own.
  - c. Forging or otherwise altering signatures.
  - d. Giving or falsifying academic documents or materials.
2. Cheating - construed as attempting to deceive or mislead which includes, but is not limited to the following:
  - a. Utilizing old tests, projects, notes or written papers.
  - b. Providing unauthorized information to a fellow student about exam content.
  - c. Receiving unauthorized aid from any source with quizzes, examinations, or other assignments.
  - d. Seeking information in an unacceptable manner during/preceding an exam or other assigned work (cheat sheet, verbal exchange, looking at another person's paper or

- electronic device, utilizing headphones, using textbook when the test/quiz is not an open book test/quiz, using textbook test bank etc.).
- e. Consulting with a classmate or others when taking a computerized test.
  - f. Disregarding other specific policies and procedures outlined for a particular class.
  - g. Utilizing unapproved technology/electronic equipment during testing (i.e.: mobile devices such as cell phones, smart devices, or tablets, etc.).
  - h. Using the same Internet Protocol network address (IP address) as another student for testing without approval from the course faculty.
3. The use of any generative artificial intelligence (AI) tool, such as OpenAI's ChatGPT, Google's Bard, or any other pre-trained language model (commonly referred to as "chatbot"), must be cited for any assignment where it has been used and may not be used unless specifically allowed by your instructor. Please see your instructor or the course policies within the syllabus if you have questions.

## Student Resources

### TUTORING SERVICES

Students in need of tutoring assistance are encouraged to contact the Office of Student Tutoring located as follows:

- Morristown Campus - Student Services Building Room L107 - (423) 585-6920
- Niswonger Campus - GRNV 226 - (423) 798-7982
- Sevierville Campus - MMH Room 210 - (865) 286-2787
- Claiborne Campus - Room 123A - (423) 851-4761

Specific tutoring assistance in mathematics and writing is available in-person and online as follows:

- Morristown Campus - English Learning Lab - HUM 120 - (423) 585-6970

[Walters State English Learning Lab \(opens in new window\)](https://www.walters.edu/academics/humanities/writing-lab)  
[ws.edu/academics/humanities/writing-lab](https://www.walters.edu/academics/humanities/writing-lab)

- Morristown Campus - Mathematics Lab - MBSS 222 - (423) 585-6872

[Walters State Mathematics Learning Lab \(opens in new window\)](https://www.walters.edu/academics/mathematics/learning-lab)  
[ws.edu/academics/mathematics/learning-lab](https://www.walters.edu/academics/mathematics/learning-lab)

### TECHNOLOGY SUPPORT



Students who need assistance with computing and technology issues should contact the IET Helpdesk by phone at Morristown: (423) 318-2742; Niswonger: (423) 798-8186; or Sevierville: (865) 286-2789 or on-line access.

[Walters State Helpdesk \(opens in new window\)](#)

[helpdesk.ws.edu](http://helpdesk.ws.edu)

## **STUDENTS WITH DISABILITIES SUPPORT SERVICES**

Students with disabilities must register with Student Support Services each semester in the Student Services Building, Room U134 (phone (423) 585-6892) if they need any special facilities, services, or consideration.

[Walters State Student Support Services \(opens in new window\)](#)

[ws.edu/student-services/disability/](http://ws.edu/student-services/disability/)

## **SUICIDE PREVENTION STATEMENT**

Walters State is committed to and cares about all students. Support services are available for any person at Walters State who is experiencing feelings of being overwhelmed, hopelessness, depression, thinking about dying by suicide, or is otherwise in need of assistance. For immediate help, contact the National Suicide Prevention Lifeline by calling or texting 9-8-8 or the Trevor Lifeline at 1-866-488-7386. Veterans may also contact the Veterans Crisis Line at 1-800-273-8255 (press 1) or Text 838255.

Walters State has a relationship in place with the following community agencies to provide services (may include crisis referral services, prevention screenings, etc.):

- Cherokee Health Systems 423-586-5032
- Frontier Health 423-467-3600

## **College Policies**

### **STUDENTS HANDBOOK AS OFFICIAL GOVERNING DOCUMENT**

This class is governed by the policies and procedures stated in the current Walters State Community College Student Handbook. All students attending Walters State Community College, regardless of the time, location, or format of the class, must abide by the rules and regulations outlined in the current Walters State Catalog/Student Handbook and the current Walters State Timetable of Classes.

[Walters State Catalog \(opens in new window\)](#)

[catalog.ws.edu/](http://catalog.ws.edu/)

[Walters State Timetable of Classes \(opens in new window\)](#)  
[ws.edu/admissions/registration/](http://ws.edu/admissions/registration/)

## **PURPOSE, LIMITATIONS AND MODIFICATION OF SYLLABUS**

This syllabus sets forth the expectations for the course content, work, and grading as well as expectations for student performance and conduct. The syllabus does not constitute a contract between the student and the instructor or the College. The information contained here is subject to change at any time. The instructor reserves the right to modify this syllabus at any time with written notification to the students. Though changes are possible, it is expected that the course will be conducted as described in this syllabus for the semester/year specified in the Course Information section of the syllabus. This syllabus is only valid for the semester/year specified and course requirements are not guaranteed for future semesters.

## **COURSE GROUND RULES**

- Students must attend the first day of on-ground class or contact the instructor prior to the first class. Failure to do this may result in being dropped from the class. Excessive absences may substantially lower the course grade.
- Regular class attendance is a student's obligation for any course regardless of format. (See the Walters State Catalog/Student Handbook). If a student misses class, it is his or her responsibility to contact the instructor regarding missed assignments and/or activities and to be prepared for the next class assignment.
- Students enrolled in web courses must follow the course attendance policy defined for online attendance during the first week of class and throughout the term. Failure to do this may result in being dropped from the class during week one OR may result in the accrual of absences which may negatively impact the student's grade in the course.
- Students who have not paid fees on time and/or are not correctly registered for this class and whose names do not appear on official class rolls generated by the Walters State student information system (MyWS) will not be allowed to remain in class or receive credit for this course.
- Electronic devices must not disrupt the instructional process or college-sponsored academic activity. Use of electronic devices is prohibited unless use of the device is relevant to the activity and use is sanctioned by the faculty member in charge. Electronic devices that are not relevant to the activity or sanctioned by the faculty member in charge should be set so that they will not produce an audible sound during classroom instruction or other college-sponsored academic activity.

## **FINANCIAL AID**

Students receiving any type of financial aid or scholarship should contact the Financial Aid Office before making any changes to their schedule. Schedule changes without prior approval may result in

loss of award for the current term and future terms.

All forms of student Financial Aid may be jeopardized or lost due to the lack of Satisfactory Academic Progress in one or multiple courses. Lack of Satisfactory Academic Progress may negatively impact a student's degree/certificate completion pace and further jeopardize Financial Aid eligibility.

## **CANCELLATION OF CLASSES AND ACADEMIC CONTINUITY**

For information related to the cancellation of classes due to inclement weather or other events, please check the Senators Emergency Text system or the college's Web site at:

[Walters State Homepage \(opens in new window\)](https://www.waltersstate.edu/home/)  
[ws.edu/home/](https://www.waltersstate.edu/home/)

[Walters State Facebook page \(opens in new window\)](https://www.facebook.com/WaltersState/)  
<https://www.facebook.com/WaltersState/>

[Walters State Twitter page \(opens in new window\)](https://twitter.com/waltersstate)  
<https://twitter.com/waltersstate>

or call the college's student information line, 1-800-225-4770, option 1; the Sevier County Campus, (865) 774-5800, option 7; the Niswonger Campus (423) 798-7940, option 7; or the Claiborne County Campus, 423-636-6200, option 7. Also, please monitor local TV and radio stations for further announcements.

When an event or disaster interrupts the scheduled operations of the college and the ability to proceed with the academic course activities as planned, the college and your instructor may alter the course plan outlined in the syllabus. Should an event occur, students should refer to their course e-Learn pages and/or class materials previously delivered to receive guidance from their instructor. Students should continue to monitor the official college channels of communication listed in the above paragraph. If you would like to sign up for the Senators Emergency Text system, please go to the following Web site:

[Senator Emergency Text System \(opens in new window\)](https://www.waltersstate.edu/set/)  
[ws.edu/set/](https://www.waltersstate.edu/set/)

Dual Enrollment students attending on a high school campus should refer to the high school inclement weather cancellations.

## **LEARNING MANAGEMENT SYSTEM**

Brightspace (commonly known as eLearn or D2L) is the college's Learning Management System (LMS).

Brightspace is committed to accessibility by "deliver[ing] a learning experience that meets the needs of all people, regardless of age or ability." [Brightspace Accessibility Standard \(opens in new window\)](#)

Brightspace is also committed to guarding student data and privacy. [Brightspace Privacy Policy \(opens in new window\)](#).