UCONN
UNIVERSITY OF CONNECTICUT

CHEM 1127Q
General Chemistry

Syllabus – Fall 2021

Excluding materials for purchase, syllabus information may be subject to change. The most up-to-date syllabus is located within the course in HuskyCT.

Course and Instructor Information

Course Title: General Chemistry (CHEM 1127Q)
Credits: 4
Lab: M 11:15am-2:15pm
Lecture: W,F 11:15am-12:30pm

Prerequisites: May not be taken out of sequence after passing CHEM 1124Q, 1137Q, 1147Q. Students who have passed CHEM 1122 will receive only 2 credits but 4 credits will be used for calculating the GPA. Repeat restrictions apply; see advising.uconn.edu/repeat-policy for more information.

Professor/Instructor/Facilitator: Connor Boyle
Pronouns: (he/him/his)
Email: connor.boyle@uconn.edu
Office: Room 305
Office Hours/Availability: Regularly on Wednesdays from 1:30 – 3:30 in Room 305. Additionally, you may and are strongly encouraged to e-mail me to make office hours by appointment at other days and times as needed, after considering that I am unavailable until 10:15am on M,W,F and that I check my e-mail three times per day. Office hours by appointment may occur in Room 305 on M,W,F or virtually on T,Th.

Course Materials

We will spend a portion of our first day of class reviewing these materials and registering for Knewton Alta, Chem101, and Labflow.

Textbook: *Chemistry: Atoms First 2e*, OpenStax. Can be accessed online for free, downloaded to a pdf document for free, and downloaded using the free OpenStax app. https://openstax.org/details/books/chemistry-atoms-first-2e. If you wish to purchase a hard copy, you may do so from the bookstore or other vendors.

Additionally:
Knewton Alta for online homework. Can be registered through a link in HuskyCT.
Chem101 for online quizzes. Can be registered through a link in HuskyCT.
Labflow for Lab Reports. Can be registered through a link in HuskyCT.
A scientific calculator that is not your cell phone.

Course Description

Chemistry is the study of matter, the changes that material substances undergo, and the energy associated with it. This course is designed to cover the basics of chemistry and provide a foundation for other science courses and advanced courses in chemistry. In general, topics covered include measurements, dimensional analysis, atomic theory/structure, properties of elements and compounds, mass relationships in chemical reactions, precipitation reactions, acid/base reactions, redox reactions, basics of thermochemistry, ionic and covalent compounds, and properties of gases, liquids, and solids.
Concepts in Chemistry are presented and sample problems are examined. Many times, announcements are given in lecture; you are responsible for these announcements even if you are absent. Opportunities will be provided for small-group interaction and interaction with the instructor. Bring your calculator to lecture. Bringing the textbook to class is optional.

Objectives:

1. Define Chemistry and recognize it as the study of matter, the changes that material substances undergo, and the energy associated with it.

2. Differentiate phases of matter and the associated physical and chemical characteristics of matter.

3. List differences between physical and chemical properties and changes of matter.

4. Demonstrate examples of dimensional analysis as applied to solving chemistry word problems associated with quantitative measurements of different phases of pure substances and mixtures.

5. Apply dimensional analysis to solve problems associated with stoichiometry - mass relations in chemical reactions.

The Courses with a Q Designation:
This course is a Q course, meaning that it has been approved as meeting the General Education requirements for the Quantitative competency. It is a university requirement that Courses with a Q designation should have the following attributes:

- Mathematics and/or statistics at or above the basic algebra level must be an integral part and used throughout the course.
- Courses must include use of basic algebraic concepts such as: formulas and functions, linear and quadratic equations and their graphs, systems of equations, polynomials, fractional expressions, exponents, powers and roots, problem solving and word problems. Formal abstract structures used in symbolic logic and other algebraic analyses are acceptable.
- Courses should require the student to understand and carry out actual mathematical and/or statistical manipulations, and relate them to whatever data might be provided in order to draw conclusions. Merely feeding numerical data into a program on a computer or a calculator to obtain a numerical result does not satisfy this requirement. Technology should be viewed as a tool to aid understanding and not as a driver of content.

Course Requirements and Grading

Summary of Course Grading:

Course Components	Points	Weight
Homework (Knewton Alta)	100	10%
Quizzes (Chem101)	200	20%
Labs (Labflow)	250	25%
Exams (3 total)	300 (100 pts. each for 3 Exams)	30%
Final Exam	150	15%
Total	1,000	100%

Homework
Online homework will be assigned through Knewton Alta with individual due dates for completion. More information about Knewton Alta is available on HuskyCT

Quizzes
Weekly quizzes will be posted on Chem101. Any missed quiz will automatically count as a 0 for that quiz. Quizzes, whether they were missed or taken, can not be made up. Your lowest quiz grade of the semester will be dropped.

Labs
Typically, labs for the following week will become open to review on Labflow on Thursdays to study and prepare for the lab and pre-lab quiz. A pre-lab quiz will be assigned on Mondays immediately before performing the lab. Online lab reports will be due on the following Friday (4 days from the day of the lab) through Labflow.

Exams
Exams may be given in the Lab section (on a Monday) using a combination of paper and computer components using a designated computer with a lockdown browser or in Lecture section.

Final Exam
A cumulative Final Exam will be assigned at the end of the semester following a Final Exam review during the last week of classes.

For additional information on undergraduate grading policies see here: https://registrar.uconn.edu/grades/

For additional information on graduate grading policies see here (note that effective Fall 2020, the grade of A+ no longer exists) https://gradcatalog.uconn.edu/grad-school-info/academic-regulations/#Grades

Grading Scale:

Grade	Letter Grade	GPA
93-100	A	4.0
90-92	A-	3.7
87-89	B+	3.3
83-86	B	3.0
80-82	B-	2.7
77-79	C+	2.3
73-76	C	2.0
70-72	C-	1.7
67-69	D+	1.3
63-66	D	1.0
60-62	D-	0.7
<60	F	0.0

Due Dates and Late Policy

Due dates can be found on individual assignments on Knewton Alta, Chem101, and Labflow and correspond to Eastern Standard time.

Tentative Course Outline and Calendar

This schedule is subject to modification. Date changes of assessments will be announced during lecture. Chapters and subjects correspond to material reviewed in Lecture, reading from OpenStax, and homework on Knewton Alta.

Summary of Exams:

Week and Date	Exam	Chapters	Ideas
Week 5 9/27 (Monday)	Exam 1	1, 2, and 3	Explain how protons, neutrons, and electrons are assembled into atoms.
Week 8 10/18 (Monday)	Exam 2	4 and 5	Explain how atoms are assembled into molecules or ionic or network solids.
Week 14 12/1 (Wednesday	Exam 3	6, 7, 8, and 9	Explain how molecules or ions exchange matter and energy in chemical reactions.

Complete, Tentative Outline of Lab/Lecture/Assessments:

Week	Lab	Lecture	Assessment
Week 1 8/30 – 9/3	Check-in Lab technique Conversion Factors and Problem Solving	Chapter 1 – Essential Ideas (Chemistry and Measurements	-
Week 2 9/8 – 9/10	Lab Safety (online homework)	Chapter 2 – Atoms, Molecules, and Ions	Quiz 1 (Ch. 1)
Week 3 9/13 – 9/17	Density	Chapter 3 – Electronic Structure and Periodic Properties	Quiz 2 (Ch. 2)
Week 4 9/20 – 9/24	Atomic Spectrum of Hydrogen	Chapter 3 – Electronic Structure and Periodic Properties *(cont.)*	Quiz 3 (Ch. 3)
Week 5 ***9/27 – 10/1***	***Exam 1 (Ch. 1 – 3)*** ***Monday, 9/27***	***Chapter 4 – Chemical Bonding and Molecular Geometry***	***Exam 1 (Ch. 1 – 3)*** ***Monday, 9/27***
Week 6 10/4 – 10/8	Chromatography	Chapter 4 – Chemical Bonding and Molecular Geometry *(cont.)*	Quiz 4 (Ch. 4)
Week 7 10/11 – 10/15	Molecular Modeling	Chapter 5 – Advanced Theories of Bonding	Quiz 5 (Ch. 5)
Week 8 ***10/18 – 10/22***	***Exam 2 (Ch. 4 – 5)*** ***Monday, 10/18***	***Chapter 6 – Composition of Substances and Solutions***	***Exam 2 (Ch. 4 – 5)*** ***Monday, 10/18***
Week 9 10/25 – 10/29	Empirical Formula	Chapter 7 – Stoichiometry of Chemical Reactions	Quiz 6 (Ch. 6)
Week 10 11/1 – 11/5	Chemical Reaction Equilibrium Solubility of Salts	Chapter 7 – Stoichiometry of Chemical Reactions *(cont.)*	Quiz 7 (Ch. 7)
Week 11 11/8 – 11/12	Acid-Base Titration	Chapter 8 – Gases	Quiz 8 (Ch. 8)
Week 12 11/15 – 11/19	Gases Ideal Gas Law	Chapter 9 – Thermochemistry	Quiz 9 (Ch. 9)
Week 13 11/22 – 11/26 Thanksgiving Recess	-	-	-
Week 14 ***11/29 – 12/3***	***Thermochemistry Calorimetry***	***Exam 3 (Ch. 6, 7, 8, 9)***	***Exam 3 (Ch. 6, 7, 8, 9)*** ***Wednesday, 12/1***
Week 15 12/6 – 12/10	Check-out	Chapter 10 – Liquids and Solids	-

State common law and federal copyright law protect my lectures, notes, handouts, assessments, and displays. Students are authorized to take notes in my class; however, this authorization extends only to making one set of notes for your own personal use and no other use. You must obtain permission from me if you wish to audio record or video record my lecture. If you are so authorized to record my lectures, you may not copy this recording or any other material, provide copies of either to anyone else, or make a commercial use of them without prior permission from me. Posting of any of my assessments, including but not limited to exams, quizzes, and solutions to recommended problems to any website or social media site violates this policy.

Privacy Statement: For information on managing your privacy at the University of Connecticut, visit the University's Privacy page. NOTE: This course has NOT been designed for use with mobile devices.

Certain classroom examples may be recorded and shared with our class using Kaltura. I will announce this in class before I begin recording. Only videos relevant to learning General Chemistry will be recorded and they will only be shared with students of General Chemistry.

Class Expectations

Chemistry is intense, analogous to learning a language; it requires a lot of thought in processing vocabulary and terminology unique to learning the subject matter. This is vital to understanding concepts and applications taught in class. Reading and homework are extremely important. In general, for each hour of class, you should expect to spend two hours of work outside of class doing the homework and learning the material.

Please do not hesitate to ask questions or attend office hours. All questions are important here. Success in this course program depends heavily on your personal health and well-being. Recognize that stress is an expected part of the college experience, and it often can be compounded by unexpected setbacks or life changes outside the classroom. Reflect on your role in taking care of yourself throughout the semester, before the demands of exams and labs reach their peak. Please feel free to reach out to me about any difficulty you may be having that may impact your performance in your courses or campus life as soon as it occurs and before it becomes too overwhelming. In addition to your academic advisor, I strongly encourage you to contact the many other support services on campus that stand ready to assist you.

Student Responsibilities and Resources

As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. Review these important standards, policies and resources, which include:

- The Student Code
    - Academic Integrity
    - Resources on Avoiding Cheating and Plagiarism
- Copyrighted Materials
- Credit Hours and Workload
- Netiquette and Communication
- Adding or Dropping a Course
- Academic Calendar
- Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships
- Sexual Assault Reporting Policy

Resources for Students Experiencing Distress

The University of Connecticut is committed to supporting students in their mental health, their psychological and social well-being, and their connection to their academic experience and overall wellness. The university believes that academic, personal, and professional development can flourish only when each member of our community is assured equitable access to mental health services. The university aims to make access to mental health attainable while fostering a community reflecting equity and diversity and understands that good mental health may lead to personal and professional growth, greater self-awareness, increased social engagement, enhanced academic success, and campus and community involvement.

Students who feel they may benefit from speaking with a mental health professional can find support and resources through the **Student Health and Wellness-Mental Health** (SHaW-MH) office. Through SHaW-MH, students can make an appointment with a mental health professional and engage in confidential conversations or seek recommendations or referrals for any mental health or psychological concern.

Mental health services are included as part of the university's student health insurance plan and also partially funded through university fees. If you do not have UConn's student health insurance plan, most major insurance plans are also accepted. Students can visit the **Student Health and Wellness-Mental Health located in Storrs on the main campus in the Arjona Building, 4th Floor,** or contact the office at **(860) 486-4705, or https://studenthealth.uconn.edu/** for services or questions**.**

Accommodations for Illness or Extended Absences

Please stay home if you are feeling ill and please go home if you are in class and start to feel ill. If illness prevents you from attending class, it is your responsibility to notify me as soon as possible. You do not need to disclose the nature of your illness, however, you will need to work with me to determine how you will complete coursework during your absence.

If life circumstances are affecting your ability to focus on courses and your UConn experience, students can email the Dean of Students at dos@uconn.edu to request support. Regional campus students should email the Student Services staff at their home campus to request support and faculty notification.

COVID-19 Specific Information: People with COVID-19 have had a wide range of symptoms reported – ranging from mild symptoms to severe illness. These symptoms may appear 2-14 days after exposure to the virus and can include:

- Fever,
- Cough,
- Shortness of breath or difficulty breathing
- Chills
- Repeated shaking with chills
- Muscle pain
- Headache
- Sore throat
- New loss of taste or smell

Additional information including what to do if you test positive or you are informed through contract tracing that you were in contact with someone who tested positive, and answers to other important questions can be found here: https://studenthealth.uconn.edu/updates-events/coronavirus/

Mask and Social Distancing Expectations

To ensure a safe learning environment for everyone, masks/face coverings must be worn at all times when inside buildings, including in the classroom, regardless of vaccination status. If a student is not wearing a mask/face covering, they will be asked by the instructor to put one on immediately or leave the classroom. Repeatedly failing to follow this expectation will result in a referral to Community Standards. Activities that involve temporarily removing the mask, such as eating or drinking are not allowed. Please leave the classroom for such activities. If an instructor is not wearing a mask/face covering, students should feel comfortable asking the instructor to put one on immediately. More information about proper usage of masks is available from UConn Environmental Health and Safety at this link.

Although social distancing will not be required inside classrooms for vaccinated individuals, please be respectful of the wishes of others who prefer to maintain social distancing. For their own protection, unvaccinated individuals are requested to maintain 6 feet social distancing from others.

Students with Disabilities

The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or http://csd.uconn.edu/.

Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government." (Retrieved March 24, 2013 from Blackboard's website)

Help

Technical and Academic Help provides a guide to technical and academic assistance.

This course uses the learning management platform, HuskyCT. If you have difficulty accessing HuskyCT, you have access to the in person/live person support options available during regular business hours through the Help Center. You also have 24x7 Course Support including access to live chat, phone, and support documents.

Student Technology Training

Student technology training is now available in a new HuskyCT short course created by students for students. It will prepare you to use the IT systems and services that you will use throughout your time at UConn, whether learning online or on-campus. It is available at https://lms.uconn.edu/ultra/courses/_80016_1/cl/outline .