COURSE INFORMATION SHEET

CHEM 1127 – Fall 2022

Instructor	Office	Office hours	e-mail Address	Lecture Time (A-120)
Dr. Cady	T-215	See Nexus www.Nexus.uconn.edu	clyde.cady@uconn.edu	MWF 10:10 AM-11:00 AM MWF 5:00 PM-5:50 PM
Dr. Quardokus	A-410	See Nexus www.Nexus.uconn.edu	Rebecca.quardokus@uconn.edu	TTh 12:30 PM-1:45 PM
Dr. Caldwell	A-212	See Nexus www.Nexus.uconn.edu	karenann.caldwell@uconn.edu	TTh 9:30 AM-10:45 AM MWF 12:20 PM – 1:10 PM
Dr. Aksenov	A-421	In person: T 5:00PM-6:00 PM	aaksenov@uconn.edu	TTh 3:30PM-4:45 PM (TLS 154)

Professor In person office hours held in chemistry A201. For nexus appointment you can search for the next available office hour at https://nexus.uconn.edu/secure_per/search_next_available.php?dser=173

Online office hours on HuskyCT

All Exams will be in class on Thursday or Friday in lecture. All exams will be 50 minutes no matter if on Thursday or Friday.

Course Web Sites: https://lms.uconn.edu/

Course Needs:

1. Cengage Unlimited Access code to gain access to Chemistry 10th edition by Zumdahl, Zumdahl and DeCoste and OWLv2 online homework.
2. General chemistry lab manual: available only at the UConn bookstore
3. A scientific Calculator
4. **Suggested material:**

1. Preparing for your ACS examination in General Chemistry (second edition): available online at http://shopping.na1.netsuite.com/s.nl/c.3773982/it.A/id.1717/.f?sc=11&category=190
   Also available with free shipping from the UConn chemistry club.

For help with online book purchases you can attend online office hours with the book publisher. : **https://cengage.zoom.us/j/99600388304 On Tuesday August 30th, 12-2 PM; Wednesday August 31st, 12-2 PM; and Thursday Sept 1st, 12-2 PM.**

Course Overview

Lecture:

Material is explained and sample problems are done. There are opportunities for asking questions. You are responsible for the entire chapter whether discussed in lecture or not, unless it is otherwise announced. Always bring your calculator to the lecture. You do not need to bring your textbook. You are expected to attend every lecture, discussion, and laboratory. Many times, announcements are made in lecture; you are responsible for these announcements even if you are not present.

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Laboratory:

Laboratory is an integral part of the course. Data and calculations sheets must be handed in at the end of the lab period in which the experiment is scheduled. All students (including those taking the course for pass/fail) must perform **all of the experiments** to pass the course. Unexcused absence from more than **one laboratory** will result in a grade of **"F"** for the entire course.

How to get Help

Professors:

Each Professor will announce their office hours or post them on HuskyCT. Questions during office hours are always welcome, especially when it is not the week before an exam. If you do not see a posted office hour time or have forgotten when that time is you can always email the professor or ask before or after lecture. Your professor is your best source of information about your grade

and will often be the quickest way to answer a question. Keep in mind that professors usually work on a 9-5 schedule.

Q Center:
http://qcenter.uconn.edu The Q center is a tutoring service specifically for students taking Q (quantitative) courses. Chemistry 1127/1128 are Q courses so you can go to the Q-center and get help. The Q center will often be open during evening hours and organize extra review sessions before exams.

Supplemental Instruction (SI):
The UConn Academic Achievement Center sponsors Supplemental Instruction sessions for general chemistry (1127/1128). http://achieve.uconn.edu/si/ Supplemental Instruction is a weekly help session carried out by an Undergraduate Student who has succeeded in the course. These sessions allow you to ask a fellow undergraduate questions about what and how you should study for the course. The SI instructors took the course just like you and through this program are available to help you.

Private tutors:
We believe that all material and help necessary for the course is provided for free through the methods listed above but if a private tutor is desired a list of tutors can be obtained by emailing chemstudentadmins@uconn.edu and asking for the general chemistry tutoring list after you provide evidence that you are enrolled in the course.

How to succeed in the course

1. Attend the class. This seems easy but it's always a problem.

2. Make sure you do your online homework every week. Homework is worth as much as an exam but you have all week to complete it. Don't procrastinate. Just because you finished the first homework quickly doesn't mean that they will all be easy.

3. When you encounter a problem that you don't understand on the homework or practice problems you need to ask someone for help. The point of doing practice problems is to show you what you understand and what you don't understand. If you struggle with a problem, you don't understand it. Take that problem to any of the help options listed above and learn how to do the problem. We encourage you to work out problems on your own but if you can't solve a problem after 30 minutes of effort then you will probably benefit from asking a professor or TA for help. You will not have 30 minutes per problem on the exam.

4. If you get a problem on an exam wrong make sure that you understand how to get it right next time. Review the exams with your TA during office hours and

with whomever else you feel is necessary. Put the exam aside for a week or so but then after you have cooled down from the exam go back and try to do the problems again. If you understand the problems you got wrong you will probably be in good position to move forward.

5. Exams questions will rarely be exact copies of the homework problems with different numbers. We write exam problems to see if students understand chemistry not to see if students can memorize the homework problems. An exam problem may be a homework problem done backwards or two homework problems combined into one. We want students to succeed in the course but we want that success to mean that you know chemistry not that you know how to repeat a problem. When preparing for the exams see if you can see how practice problems are related. Can you identify practice problems that use the same concept but are the reverse of one another? Do you understand why you did each math step?

HuskyCT is important

You should learn how to access HuskyCT (https://lms.uconn.edu/) for Chem 1127/1128.

After the due date for a Prelab quiz (Sunday night) you can look up your answers and the correct answers by going to the lab HuskyCT page, selecting "My Grades" in the bar on the left, select the pre-lab quiz in question, On the quiz page select the score number which is a link. You should then see the complete answer key for the quiz if it is after the due date. The same method can be used to look at MC quiz results after all the quizzes have been administered.

You should check HuskyCT each day in order to see if there is an announcement. HuskyCT "announcements" will be used to announce the arrangements in case of **late opening/early closing or cancellation**.

When you send an e-mail to your instructor please indicate the reason in the subject line, such as OWL homework, lab, missing an exam etc. Also include the course number since each instructor teaches more than one course.

Online Homework

Every Friday night there will be an Online Homework assignment due. These assignments can be accessed through HuskyCT in the "weekly tasks" folder.

In order to access this homework program for the entire semester you will need an access code. This access code is included in the "Cengage unlimited" access code you purchased as part of the course materials. If you have yet to purchase an access code, you can still access the online homework through HuskyCT for 1 week free. After that week you will need to purchase a code.

If you miss a due date on the online homework you will need to contact your professor. TAs are not able to give you an extension on your homework.

What to do if you missed a lab or an exam

Missed Lab:

- Contact your professor and TA by email immediately so that you can be given access to the online make up lab. Make up labs must be completed by the Sunday of the week of the missed lab. Any request to make up a lab after the normally scheduled week of the lab will only be done after documentation specifying why you were unable to complete the lab for multiple days is provided. Scheduled vacations are not considered a valid excuse.

Absence from Exams:

Exams are scheduled during your lecture section. Unless you have proof of a university-sanctioned excuse (death of a close family member, illness with doctors note, university sanctioned event) you must take the exam during your scheduled lecture period. If you miss more than 1 regularly scheduled exams you must meet with your professor to determine if you can complete the course.

If you have a pre-arranged event during an exam time you may discuss this time conflict with your professor. The exam will only be given during the scheduled 2 day exam period scheduled in the syllabus, any other exam time counts as your 1 allowable absence.

If you miss an exam due to unforeseen circumstances, such as an illness and are unable to arrange a make up with your lecture instructor before the exam period is over you need to contact the lecture instructor as soon as possible and provide appropriate evidence of your emergency. There is no option of taking an exam after the exam period is over. If you do not inform your instructor of a missed exam within one week it will be counted as a zero.

Final Exam (From Dean of Students)

When students are forced to miss a final examination due to illness, accident, death in the family or other unavoidable reasons they can come to the Dean of Students Office to receive approval to arrange another exam time with their instructor. Students should present appropriate documentation to support their request. **Come to the Dean of Students Office for this service.** With other exams and assignments which are required during the semester students bring their documentation of extenuating circumstances directly to their instructors.

Grades

Exam Grades: The exam grades will be posted on HuskyCT or gradescope after all the grading is completed. Please check the announcements every day. After the grades are posted you have **one week** to check whether the grade that shows on HuskyCT or gradescope is correct or not. If there is a mistake you need to contact Dr. Cady or your lecture professor. After one week grades are final and cannot be changed for any reason. All grades will be posted in the HuskyCT gradebook.

Exam grades **WILL NOT** be given out by e-mail.

Final Course Grade:

The syllabus lists the value of each part of the course according to Plan 1 and Plan 2. Your final letter grade for the course will be calculated according to the percent values of both Plan 1 and Plan 2. You will receive the higher of the two grades.

	Points Distribution	Plan 1	Plan 2
Exams (3 exams 100 pts each)	300 points	30%	20%
Weekly quizzes	125 points	12.5%	12.5%
Final Exam	200 points	20%	30%
Laboratory	150 points	15%	15%
Online Homework	175 points	17.5%	17.5%
Pre-lab quiz	50 points	5%	5%
Total	1000 points	100%	100%

Grading

As a starting point, we will use a >90% = A; 80-89% = B; 70-79% = C; 60-69% = D, <60% = F scale. Plus and minus grades will be assigned within each bracket.

Additional Information

Academic Integrity:

Although students may discuss their assignments, and support each other's learning process, each student is required to do his or her own work on online homework, and lab related work (Prelabs and Data and Calculations). This is true even when students work with a lab partner to collect data. Cheating in any form and at any task will not be tolerated. The minimum consequence will be an **"F"** for the course. For possible University sanctions, consult "The Student Conduct Code" available at http://www.community.uconn.edu by clicking on **"**Part IV Student Conduct Policies".

Entering the exam with a programmable calculator will be considered cheating, no matter what or if anything was programmed into it. The **grade** for the course will be an **"F"**.

Lecture decorum

Be considerate of your classmates at all times. Turn off cell phones as you enter the lecture hall. If you have to leave early, sit near the back and minimize your disruption as you leave. Side conversations are distracting to those around you and interfere with the learning process. For more on this topic please explore The Student Code at http://www.community.uconn.edu/student_code.html .

Support Services:

- Counseling and Mental Health Services: 486-4705 (after hours: 486-3427) www.cmhs.uconn.edu
- Career Services: 486-3013 www.career.uconn.edu
- Alcohol and Other Drug Services: 486-9431 www.aod.uconn.edu
- Office of student services and Advocacy: 486-3426 www.ossa.uconn.edu
- Academic Achievement Center (achieve@uconn.edu, 486-4889) provides coaching, workshops (time management, note taking, sstrategies for deeper learning, exam preparation), and services that enhance skill development, effective decision-making and personal transitions to the university setting. This is the place to go when you want to do better but you don't know how.

FROM Center for Students with Disabilities: Please contact your instructor during office hours to discuss academic accommodations that may be needed during the semester due to a documented disability. If you have a disability for which you wish to request academic accommodations and have not contacted the Center for Students with Disabilities (CSD), please do so as soon as possible. The CSD engages in an interactive process with each student and reviews requests for accommodations on an individualized, case-by-case basis. The CSD collaborates with students and their faculty to coordinate approved accommodations and services. The CSD is located in Wilbur Cross, Room 204 and can be reached at (860) 486-2020 or at csd@uconn.edu. Detailed information regarding the process to request accommodations is available on the CSD website at www.csd.uconn.edu.

CHEM 1127 FALL 2022

Week	Dates	E = Experiment Problem Set (PS)/Quiz (Q) /Lab
1	8/29 – 9/2	Online Homework: **None** **Lecture:** Intro/ Chapter 1 (1.1-1.10) **Lab:** • No Lab the first week.
2	9/5 – 9/9	Online Homework: **Online homework practice assignment (not graded)** **Lecture:** Chapter 2 (2.1-2.8) no history dates and names on exam. ***Lab:*** *No lab for the second week* Make sure to watch the safety video and complete the online safety quiz. ***Lecture will not meet on labor day.***
3	9/12 – 9/16	Online Homework: **1127 HW 1 (chapter 1 and 2)** **Lecture:** Chapter 3 (3.1-3.7) **Lab:** Check in and • **Experiment 1** Remember to bring your goggles to lab.
4	9/19 – 9/23	Online Homework: **1127 HW2 (Chapter 3)** **Lecture:** Chapter 3 (3.8-3.11) Chapter 4 (4.1-4.3) **Lab:** Experiment 2
5	9/26 – 9/30	Online Homework: **1127 HW3 (Chapter 4 up to but not including 4.8)** **Lecture:** Chapter 4 (4.4-4.11) **Exam 1 (chapter 1-3) 9/29 or 9/30** **Lab:** Experiment 3
6	10/3 – 10/7	Online Homework: **1127 HW4 (finish chapter 4)** **Lecture:** Chapter 5 (5.1-5.7) **Lab:** Experiment 4
7	10/10 – 10/14	Online Homework: **1127 HW5 (5.1-5.3)** **Lecture:** Chapter 5 (5.8,5.9 concepts) Chapter 6(6.1-6.2)

		Lab: Experiment 5
8	10/17 – 10/21	Online Homework: **1127 HW6 (end of chapter 5)**
		Lecture: Chapter6 (6.3-6.4) **Exam 2 (chapter 4-5) 10/20 or 10/21**
		Lab: Experiment 6
9	10/24 – 10/28	Online Homework: **1127 HW7 (6.1 and 6.2)**
		Lecture: Chapter 6 (bond energies) /Chapter 7(7.1-7.3)
		Lab: Experiment 7
10	10/31 – 11/4	Online Homework: **1127 HW8 (end of chapter 6)**
		Lecture: Chapter 7 (7.4-7.8, 711-7.13)
		Lab: Experiment 9
11	11/7 – 11/11	Online Homework: **1127 HW9 (chapter 7)**
		Lecture: Chapter 8 (8.1-8.4 (8.5-8.6 concept)8.7-8.12
		Lab: TBA
12	11/14 – 11/18	Online Homework: **1127 HW10 (8.1-8.11)**
		Lecture: Chapter 8 (8.13)/9 (9.1-9.4) simple MO theory only
		Lab: TBA
13	11/28 – 12/2	Online Homework: **1127 HW11 (End chapter 8 and 9)**
		Lecture: Chapter 10(10.1-10.9) 10.3-10.7 quick concept only **Exam 3 (chapter 6-9) 12/1 or 12/2**
		Lab: Experiment 8
14	12/5-12/9	Online Homework: 1127 HW12 (chapter 10)
		Lecture: Finish chapter 10
		Lab: Check out
		FINAL EXAM (ACS Final exam): TBA (Chapter 1-10)

Suggested problems list Chemistry 1127

Chapter 1	Practice problems from Chapter 1
Phases	83
Classification of matter (mixture vs compound)	85, 87
Physical Properties	89, 91
Chemical Properties	89, 91
Measurement (uncertainty)	37
SI units and metric conversions	43
Accuracy vs Precision	23
Sig Figs	33, 39
Density	75, 79, 81
Dimensional Analysis	43, 45, 51, 101, 61,63

Chapter 2	Practice problems from Chapter 2
Atomic structure	25, 49
Isotopes	61, 67, 69
Diatomic molecules	Have No Fear Of Ice Cold Bears (H_2,N_2,F_2,O_2,I_2,Cl_2,Br_2)
Chemical formulas (molecular, empirical)	41
Percent composition	39
Periodic table	55, 29
Molecular compounds	Non-metal and non-metal
Ionic compounds	Metal and non-metal
Chemical Nomenclature	75, 79, 87
Names of Polyatomic ions	Table 2.5
Names of Acids	Tables 2.7 and 2.8

Chapter 3	Practice problems from Chapter 3
Calculate MW	25, 47
Isotopes	39, 43
Understand what a mole is	31, 49
Percent composition	31, 77, 161
Empirical Formula	29, 91
Molecular Formula	91, 95
Balancing chemical equations	97, 101, 99, 103
Reaction Stoichiometry	111, 115
Combustion Analysis	179
Limiting Reagents	123, 125, 127
Percent Yield	129, 131

Chapter 4	Practice Problems from Chapter 4
Aqueous solutions: Electrolytes	27
Molarity (moles/liters)	31,33
Dilution ($M_1V_1=M_2V_2$)	43
Classifying reactions	Acid base, precipitation, or redox
Net ionic equations	53
Precipitation	49,51,55,65 Be able to use solubility chart
Acid/Base	71,79,83
Reduction/Oxidations (redox)	89
Assigning Oxidation numbers	85
Balance Redox with half reactions	91,93
Limiting reagent used in reactions	67
Titration	83, 67

Chapter 5	Practice Problems from chapter 5
Gas pressure in open and closed manometer	43, 45
PV=nRT relationships	25
PV=nRT plug and chug	47,49, 59, 65
Stoichiometry of ideal gases	29, 71
Partial pressure of gas mixtures	87, 91, 93
Collect gas over water	99
Kinetic Molecular Theory	115
Effusion/Diffusion	119, 121

Chapter 6	Practice Problems from end of Chapter 6
Heat, work, and energy	25, 33
Exothermic vs endothermic	19
Measuring heat (q or ΔH)	57
Calorimetry	65,67
Heat capacity (C) vs specific heat capacity (c)	73
Thermal equilibrium	59, 63
State vs Path functions	13
Enthalpy of combustion	75
Enthalpy of formation ($\Delta H°_f$)	83
Calculate $\Delta H°_{rxn}$ from $\Delta H°_f$	89, 91
Hess's Law	75, 79

Chapter 7	Practice Problems from end of Chapter 7
Determine frequency and wavelength	45, 51
Energies of electrons in Bohr model	63
Bohr model electron transitions	65, 67
Quantum numbers (n,l,m_l,m_s)	33, 79
Pauli Exclusion Principle	85
Electron configuration of atoms and ions in the ground state	91, 97, [Chapter 21: Problem 25]
Molecular orbital types (s,p,d,f)	155
Degenerate Orbitals	107
Valence electrons	103
Periodic table trends (atomic radius, electron affinity, ionization energy)	111, 113, 123, 131, 159
Variation in ionic radii	115

Chapter 8	Practice problems from chapter 8
Ionic bonding/ Covalent bonding	19, 39
Electronegativity	31
Electron configuration of ions	49, 51
Lewis dot structures	87, 89, 91
Formal charge	103, 105
Resonance	95, 99
Bond strength	101
Electron Pair Geometry	113, 115
Molecular Structure	117, 119, 121
Polarity and dipole moment	123, 125
Lattice and bond energies	69, 81

Chapter 9	Practice problems from chapter 9
Hybridization	29, 31, 33
Sigma and pi bonds	37, 43
Multiple bonds	15
Molecular orbital diagrams	61, 63

Chapter 10	Practice problems from chapter 10
Intermolecular Forces	37, 39, 41
Phase Diagrams	105, 107
Crystal Unit cells	53,55, 71
Heating curves and phase changes	97, 99, 103
Clausius-Clapeyron Equation	93, 95

We have tried to include everything, but we may have missed some concepts, so be sure to go through our book, your notes, and all of the homework. Study any concepts that you come across!!