

CHM 130 Fundamental Chemistry Lecture Syllabus

Glendale Community College North Campus, Spring 2020, section 11459

Prerequisites: A grade of C or better in [CHM090 or MAT090 or MAT091 or MAT092 or (MAT103AA and MAT103AB) or higher or satisfactory score on math placement exam] and [RDG091 or higher or eligibility for CRE101 as indicated by appropriate reading placement test score].

Instructor Information

- Instructor: Mr. Scott Lannen
- Office Location: GCN D building Room 124
- Office Hours: Saturday, 8 a.m. – 10:50 a.m.
- Phone: (623) 845 3675
- Email: scott.lannen@gccaz.edu
- Website: <http://web.gccaz.edu/~kimld88531/chm130lec.htm>

Course Information

- Course format: Face-to-Face
- Credit hours: 3.0
- Classroom location: GCCN D-124
- Course days and times: Saturdays, 8 a.m. – 10:50 a.m.
- Exceptions: Holidays as marked on Schedule Grid
- Instructional Contact Hours & Out-of-Class Student Work: For this 3.0 credit hour course, you should plan to spend at least 3.0 hours on course content or seat time (direct instruction), and 6.0 hours on out-of-class student work weekly.
- Final Exam day and time: Saturday, May 2, 2020 at 8 a.m.
- Tutoring occurs daily, website: <http://www2.gccaz.edu/academics/departments/chemistry/tutoring>

Course Description

A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry. Designed to meet needs of students in such diverse areas as agriculture, nursing, home economics, physical education and water technology.

Course Competencies - <https://aztransmac2.asu.edu/cgi-bin/WebObjects/acres.woa/wa/freeForm2?id=99575>

1. Define "chemistry" and describe its main branches. (I)
2. Describe the relationships between matter and energy. (II)
3. Distinguish between physical and chemical properties and changes. (II)
4. Interpret symbols and formulas in terms of numbers and kinds of atoms. (II)
5. Describe the physical states of matter with the aid of the Kinetic Molecular theory. (II, IX)
6. Classify matter as elements, compounds, or mixtures. (II)
7. Describe the properties of metallic and non-metallic elements. (II)

8. Use the Unit-Factor Method in solving chemistry-related problems. (III)
9. Name and write formulas for simple inorganic compounds. (IV, VII)
10. Describe the relationship between the outer electronic structure of atoms and their chemical properties. (V)
11. Use the Periodic Table to estimate the properties of elements and compounds. (V)
12. Characterize the fundamental particles comprising the atom with respect to charge and mass. (V)
13. State the number of protons, electrons, and neutrons in any given isotope, neutral or charged. (V)
14. Use the Periodic Table in predicting the number of electrons, formula for a compound, and metallic or nonmetallic characteristics. (V)
15. Draw a Lewis structure (electron dot) for a given ion or compound. (VI)
16. State the type of intermolecular force that exists for a given substance. (VI)
17. Describe the properties of ionic and covalent compounds. (VI)
18. Describe the shape and polarity of simple molecules. (VI)
19. Complete and balance simple chemical equations. (VIII)
20. Solve elementary stoichiometry problems. (VIII)
21. Classify a reaction as endothermic or exothermic. (VIII)
22. List the factors affecting the rate of a reaction. (VIII)
23. Describe the chemical and physical properties of water. (IX)
24. Describe the properties of solutions. (X)
25. Identify substances as electrolytes or nonelectrolytes. (X)
26. Classify substances as acids, bases, or salts. (XI)
27. Explain the behavior of buffer systems. (XI)
28. Define the pH scale of measuring the relative acidity of solutions. (XI)
29. Define and identify redox reaction as exemplified by single replacement and combustion reactions. (XII)

Note: Your instructor will make every attempt to follow the following procedures and schedule, but they may be changed in the event of extenuating circumstances. Changes will be announced.

Textbooks, Materials and Technologies

Required Materials: Text Book is online at <http://web.gccaz.edu/~kimld88531/rev130.htm>

Course Web Site is at <http://web.gccaz.edu/~kimld88531/chm130lec.htmz>

Calculator, non-graphing, non-programmable is required such as a TI-30XA

Attendance Requirements

Attendance in lecture is mandatory and necessary for adequate performance in the class. Instruction begins on the first day of class. If you are absent, you are still responsible for all material covered during your absence. If you are absent 2 times in a 1-day per week class without contacting me you will be withdrawn from the course with a W or Y depending on the date.

Attendance is essential to achieving course objectives. You are expected to attend all class sessions. Should you miss more than 2 face to face sessions, you may be withdrawn for excessive absences.

Withdrawals

I will withdraw anyone who misses 2 days in a 1-day per week class without talking with me. Grades of "I" are given only under extreme circumstances if the student request so in writing, meets with the instructor, and the instructor approves the situation before the final exam. If you withdraw from the CHM 130 lecture within the first ten weeks of class, you must also withdraw from the lab. Students who take the final exam are not eligible to receive a "W."

It is the responsibility of the student to drop the course before the deadline for student-initiated withdrawal. Students should contact their instructor to be withdrawn. The instructor may drop a student for excessive absences (as defined by the instructor) with a grade of W or Y, depending on course grade at time of withdrawal. After the deadline specified in the current GCC course schedule, you will need instructor approval to withdraw. If approved for withdrawal, students receive a grade of "W" if the current course average is 60% or better, or a "Y" if the current course average is less than 60%. **Students may not withdraw during the last two weeks of the semester; an A-F grade will be assigned.** Contact your instructor if you wish to remain in the lecture course with a failing grade and receive a "W" (the instructor will evaluate the appropriateness of each situation on a case-by-case basis). Note: A grade of "Y" counts as an "F" in your GPA until the class is retaken and a higher grade is earned. If you require a letter grade because of financial aid, you must continue to attend class.

Grading Standards & Practices

Letter Grade and Percent Range	Your grade will be determined as follows:
A 90-100%	Homework– 20%
B 80-89%	Quizzes – 20% (lowest score dropped)
C 70-79%	Exams - 40%
D 60-69%	Final Exam - 20%
F 0-59%	

Home Works - Home Works are assignments completed outside of class. They will be posted on the website. You may work in a group of 1 person up to 3 people and turn in one paper for the group, but I must see each person's handwriting on the assignment equally. You may not simply put someone's name at the top of the assignment. You may use your textbook. I suggest you work with another person on home works and turn in one copy for both of you with alternating handwriting. But if two people turn in two separate home works that are the same, that is considered cheating because it looks like one person just copied the other person.

Quizzes - Quizzes are announced class assignments worked on individually without any external help other than a calculator. You may use the Periodic Table if needed. If you miss an in class quiz, it can be the one dropped, or you will have the opportunity to make it up in the testing center (C building, North campus) the following week.

Exams and Final - Exams are individual effort. Exams will take 50 minutes minimum and consist of multiple choice and short answer type questions. You may not use your book, notes or other material during the exams except a non-programmable, non-graphing calculator. Your exams will be averaged and count as 40% of your final grade. The Final Exam will be similar to other exams except it will be comprehensive, only multiple-choice, and it will count as 20% of your final grade. Cell phones and Apple Watches must be off during exams and put away. If you miss an exam, the same score as your final exam will replace it if instructor approved. Exams can be made up the following week in the testing center, just like quizzes. No exam can be made up after one week.

Excused Absences - Absences are excused for the following reasons if properly documented in writing: illness such that a medical doctor or ER was visited, death in the immediate family, approved GCC travel, a child that you care for is ill, or transportation to the class was impossible due to a car accident. Absences are not excused if there

is no documentation. Notes from parents are not acceptable. It is up to YOU to contact me regarding absences, to check if you missed an assignment, a quiz or important announcement, and to see what we covered in class. Individual assignment instructions in Canvas or handed out in-class will include evaluation criteria.

Late Work / Make-Up Exams

Late work: You must turn in all assignments **complete** and **on time**. *Complete* means you have done everything specified in the assignment instructions. *On time* means within 10 minutes of class start time on the due date. Assignments may be turned in early, but I do not accept them late without giving *prior approval* for work to be turned in late.

Make-Up Exams: You must take exams during their scheduled time. A missed exam will receive a grade of zero. The final exam score may replace one missed exam score with instructor approval. The final exam can only replace one missed exam total.

Remember, one missed assignment or exam may lower your grade but will not cause you to fail. If your work is incomplete or late, or you must miss an exam for whatever reason (stuck at work, sick, emergency at home, etc.), these are the consequences. For best results, plan ahead, keep up with your coursework, attend class regularly and promptly communicate with your instructor about any issues impacting your academic performance.

Instructor Expectations

Academic Integrity and Student Responsibility

Violations of scholastic ethics are considered serious offenses by Glendale Community College, the Chemistry Department and by your instructor. Students may consult the GCC Student Handbook at <http://www2.gccaz.edu/student-life/office-student-life/student-handbook> Students caught cheating will receive a grade of zero on the assignment. Repeat offences will be cause for failing the course. If you believe cheating is occurring, please let me know. Students are responsible for knowledge of the material in the GCC Student Handbook and Catalog.

Classroom Behavior

Possession of drugs, alcohol or firearms on college property is illegal. Cell phones, music players, ipods and PDAs must be turned off during class time. During exams, these devices may not be out at all. Students creating disturbances that interfere with the conduct of the class or the learning of others will be asked to leave. Students should be aware of the academic catalog: <http://www2.gccaz.edu/gcc-catalog>

Course Outline

CHM 130 Tentative Class Schedule			
Dates	Topic	Notes	Corresponding Lab
Jan 11	Welcome Chapter 1-Matter		MUST attend lab this week or get dropped
Jan 18	Chapter 2-Math Skills Chapter 3-Metric units and conversions	<i>Monday Holiday</i>	MUST attend safety training, Safety
Jan 25	Quiz #1 Chapter 4-Atoms		States of Matter
Feb 1	Chapter 5-Atomic Structure HWK #1 Due		Chemical & Physical changes
Feb 8	Exam I (Ch. 1-4) Chapter 6-Periodic Table		Metric System
Feb 15	Quiz #2 Chapter 7-Chemical Bonding	<i>Monday Holiday</i>	Density
Feb 22	Chapter 8-Nomenclature	<i>Feb 28 Last Day to Withdraw yourself</i>	Heat and Energy
Feb 29	HWK #2 Due Chapter 9-Acids and Bases		Molecular Models
Mar 7	Exam II (Ch. 5-9) Chapter 10-Chemical Reactions		pH of common items
Mar 21	Quiz #3 Chapter 11 - Equilibrium		Electrolytes
Mar 28	Quiz #4 Chapter 12-The Mole Chapter 13 - Stoichiometry	<i>Mar 27 Must drop lab if dropped lecture</i>	Chemical Reactions
Apr 4	Chapter 14 - IMF		Reactivity of Metals
Apr 11	Quiz #5 Chapter 15- Solutions		Double Replacement
Apr 18	Chapter 16-Gases HWK #3 Due		Vinegar Titration
Apr 25	Exam III (Ch. 10-15)	<i>Apr 20 Last day to ask for a W</i>	Lab Finals
May 2	Final Exam		

Course Technology Information

General Statement for Use of Web-Based Third-Party Tools and/or Canvas Learning Tool Integrations

In this class, you will be using web-based third-party tool(s) and/or Maricopa's Canvas Learning Management System Learning Tools Interoperability ("LTIs") to complete or participate in assignments, activities and/or access course materials. You may be required to establish a user name or password, submit work and/or download information from these tools. There is, therefore, some risk that individuals electing to use the products and services made available by these tools may place any student information shared with the tool vendor at a risk of disclosure.

In this class, you will be using:

Canvas

- Terms of Use: <https://www.canvaslms.com/policies/terms-of-use-canvas>
- Privacy Policy: <https://www.canvaslms.com/policies/privacy>
- Accessibility statement: <https://www.canvaslms.com/accessibility>

Proctored / Monitored Exams This course requires proctored/monitored exams.

Student Rights & Responsibilities

You are expected to know and comply with all current published policies, rules and regulations as printed in the college [Academic Catalog](#), Syllabus, and/or [Student Handbook](#). You are expected to know the information in this syllabus.

Academic Catalog: <http://www.gccaz.edu/gcc-catalog>

Student Handbook: <http://www.gccaz.edu/student-life/office-student-life/student-handbook>

Information for Students with Disabilities

If you have a documented disability, including a learning disability, and would like to discuss possible accommodations, please contact the GCC Disability Resources and Services office at 623.845.3080 or email drsfrontdesk@gccaz.edu.

Sexual Harassment is any unwelcome, verbal or physical conduct of a sexual nature that is sufficiently severe, persistent or pervasive that it alters working conditions and creates a hostile environment or reasonably interferes with, limits, or deprives a student of the ability to participate in or benefit from any educational program or activity. Sexual harassment and discrimination in any college education program or activity are prohibited. Sexual Harassment may include hostile environment harassment, sexual assault, inducing incapacitation for sexual purposes, sexual exploitation or dating violence and stalking.

Students should report any discrimination and/or harassment they experience and/or observe to the [GCC Office of Student Life](#) in the Student Union. Phone (623) 845-3525 or email laura.dodrill@gccaz.edu.

To view the full Sexual Harassment Policy refer to the Student Handbook, [Sexual Harassment Policy for Students \(AR 2.4.4\)](#) (see also 5.1.8)