

Chemistry Syllabus

Instructor: Mrs. Denise Gaul

Email: dgaul@lccs.cc

Course Description

College Preparatory Chemistry is designed to give college-bound students a solid understanding of a wide range of chemistry concepts. Chemistry is the study of matter; we explore how it has been designed by God and how it undergoes changes. Students study these reactions at the subatomic, atomic, molecular, and system levels. Topics include formulas, reaction types, bonding, stoichiometry, thermodynamics, nomenclature and a study of gas laws.

Course Goals

1. To gain a foundational understanding of chemistry through a biblical worldview.
 2. To see God's Principles of Individuality and Order in the study of the structure of matter.
 3. To gain an appreciation for God's Creations and His reliability through the laws of science, specific to chemistry.
 4. To make practical application of chemical principles to many areas of chemistry
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Mission Connection

LCCS exists to glorify God as a community of faith and learning dedicated to forming disciples of Jesus Christ, pursuing goodness, truth, and beauty, cultivating wisdom and virtue, and furthering the highest ideals and practices of human flourishing. This course supports the LCCS mission to educate and equip students with knowledge and the love for God.

Textbook and Required Materials

Textbooks

1. General Chemistry. John D. Mays, Novare, 2nd edition, 2016
2. Chemistry Experiments for High School. Christina H. Swan & John D. Mays, Novare, 2014
3. POGIL for High School Chemistry
4. Supplemental handouts and materials
5. Lab materials

Required Materials: students are required to bring these materials to class.

1. Textbook
 2. Pens (black,blue), pencils, a Highlighter
 3. Subject notebook and/or loose notebook papers
 4. 3-ring binder (1.5", hard sided)
 5. 4 dividers (notes, homework, handouts, assessments)
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Classroom Procedures

- Come to class quietly with all learning materials and prepared to learn.
- Have your homework ready to be checked/stamped at the beginning of class.
- Lab reports & project assignments are due at the beginning of class.
- Record homework assignment from the Homework board.
- Prepare for learning by completing the Bell Work activity on the board.
- Participate in all class and collaborative group activities.
- Seek Mrs. Gaul's permission if you need to leave the classroom or your seat during instruction.
- Remain in your seats until Mrs. Gaul dismisses you.

Lab Guidelines:

- You must adhere to all lab safety guidelines that are stated in the Flinn Scientific Student Safety Contract and were reviewed in class.
- All lab instruments and tools must be washed, dried and put back into the designated storage at the end of each lab. All waste products must be disposed of properly.
- Lab station must be wiped clean at the end of each lab.
- Students will be dismissed as soon as their lab station is cleaned.

Classroom Expectations (Student Learning Agreement)

God has created us each uniquely. He has also created us to worship Him with our efforts in everything that we do. Seeking to perform at the highest level of excellence is an act of worship to our Creator. As such, I agree to the following:

- I will be **ON TIME** for all classes every day.
I understand that a total of three unexcused tardies to any and all of my classes will result in an immediate before or after-school detention.
- I will be **PREPARED** for class every day.
I will have a writing utensil, paper, my textbook, and any other necessary resources for success in the classroom. Not being prepared for class may result in a deduction of points from my class participation grade.
- I will **COMPLETE** all assignments on time.
I understand that late assignments will result in a deduction of 10% of the assignment grade *per day* that the assignment is late up to 50%. After 5 days, the grade becomes a zero for the assignment. Late work will not be accepted for credit but may still be required to be completed.
- I will **RESPECT** my instructor(s), any LCCS staff member, volunteer(s), classmates, and other students in other grades.
Profanity, rude gestures, cruel teasing or put downs will not be tolerated. Such behavior(s) will first be addressed and managed by the instructor. If such behavior(s) continue students may be referred to the Dean of Students.
- I will keep my **CELL PHONE OFF** and away at all times during the school day (8 am-3:10 pm).
I understand that if my cell phone is visible or on, the instructor will confiscate the device and the Student Handbook Cell Phone Policy will be followed.

In addition to the above student expectation, the following specific expectations apply to Chemistry class to ensure successful learning outcome: This course investigates the nature and structure of

matter, including the fundamental properties of elements, compounds, and mixtures. Chemical processes and reactions are observed and tested to understand how different parts of matter are united to form substances that exist in nature as well as the causes that alter their states. Students will integrate conceptual understandings and utilize algebra problem solving skills to develop the full understanding of Chemistry. It requires that students commit to regular review of materials learned and diligent practice. I am committed to helping you be as successful as you choose to be, so please do not hesitate to contact me with any questions, concerns or assistance. In this class, students will...

1. Demonstrate the biblical principles of RESPECT, RESPONSIBILITY, KINDNESS AND DILIGENCE.
2. Come to class prepared. In order to facilitate class discussions and reduce lecture time in favor of collaborative exercises and knowledge enhancing activities, you must complete all required homework assignments.
3. Need to submit assignments on time at the ***beginning of class***.
4. ***Nightly study*** is key to success in quizzes and tests
5. Need to write in ***complete and thoughtful sentences*** to thoroughly explain his/her ideas and knowledge.
6. ***Follow all Lab Safety Practices and clean-up procedures***
7. Read the lab protocol carefully and complete any ***pre-lab assignments before each lab activity***.

Discipline: To instruct and govern; to teach rules and practice, and accustom to order and subordination (Noah Webster 1828). Discipline is done in the classroom as necessary to maintain a safe, orderly and conducive-to-learning environment for all students. Students whose behavior is deemed by the teacher to be disrespectful and/or disruptive to the teaching and learning processes by any means will serve the following consequences:

- 1st offense – verbal warning. (seating may be changed)
- 2nd offense – The student will have a meeting with Mrs. Gaul and parents will be contacted.
- 3rd offense – The student will be given a detention and be referred to the Dean of Students.

Students removed from class due to disciplinary problems are responsible to acquire any missed work or notes.

Course Outline

- Unit 1: Introduction to Chemistry, Matter and Properties, Scientific Method, Measurements
 - Unit 2: Atoms and substances
 - Unit 3: Atomic Structure & The Periodic Law
 - Unit 4: Chemical Bonding and Nomenclature
 - Unit 5: Chemical Reactions
 - Unit 6: Mole, Mole conversion and Stoichiometry
 - Unit 7: Thermodynamics
 - Unit 8: Kinetic theory
 - Unit 9: The Gas Laws
 - Unit 10: Solution
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Major Assignments

- One presentation project
 - Research project(s)
 - Unit Tests
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Homework:

Nightly homework is required. Even if no specific homework is “assigned” students are still expected to review notes and make sure that you are current with the learning materials. Additional homework is assigned in an effort to reinforce specific concepts and is never given as “busy work”. The frequency of assignments depends on the level of difficulty and type of material covered or will be covered. Most homework will be stamped and given credits for completion of the assignment, while some will be collected and given credits for correctness.

1. Missing homework will receive a Missing (M) mark which equates to a “0” grade on the gradebook until it is submitted.
2. Late assignments will receive 10% deduction in grade per day.
3. All late/Missing or Incomplete assignments of the current chapter must be submitted within 5 week days from the day it is due to receive late credit.
4. A pattern of late homework will result in a parent contact.

Late Assignment Pass: You will be given one (2) Mrs. Gaul’s Late Assignment Passes for each quarter. If you miss a homework assignment for any reasons, you may turn in your late homework assignment along with a completed Late Assignment Pass within 24 hours of the due date and have the 10% deduction waived. The Late Assignment Passes only applies to daily homework assignments and labs. They do not apply to projects, quizzes, or tests. You may only use two (2) passes per quarter.

Assessments

Formative assessment – includes homework assignments, class assignments, white board practice, lab exercises, and quizzes. Quizzes will be both announced and unannounced. This is to check for understanding and make sure students are keeping up with the learning materials.

Summative assessment – chapter tests at the end of each unit, lab reports, research projects, and midterm exams at the end of the semesters. Midterm exams comprise previous test materials. Always review!

Field Trips

No field trips planned at this time.

Grading Overview

Weighted Structure

- 40 % Tests/Projects
- 30 % Quizzes/Labs/Minor Projects

The syllabus is subject to change.

Grading Scale

4.0 = A = 93-100	2.0 = C = 73-76
3.7 = A- = 90-92	1.7 = C- = 70-72
3.3 = B+ = 87-89	1.3 = D+ = 67-69
3.0 = B = 83-86	1.0 = D = 63-66
2.7 = B- = 80-82	0.7 = D- = 60-62
2.3 = C+ = 77-79	0 = F = 0-59

- 20 % Homework/Classwork
 - 10% Class Participation
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Class Participation and Attendance

It is important that you be present in class and actively participate in class discussion and collaborative group activities.

- If you anticipate a pre-planned absence, you need to communicate the absence to Mrs. Gaul in advance.
 - If an unplanned absence occurs, you need to communicate with Mrs. Gaul as soon as you return to class regarding missed assignments.
 - In-class assignments during your absence may not be possible to make up.
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Make-up Work

If you are absent, it is your responsibility to communicate with Mrs. Gaul and check Family Portal to obtain any notes, handouts, or other materials that you may miss. The hard copies of missed materials may be retrieved from the absent folder labeled "Chemistry" in the classroom. Homework assigned prior to an absence must be turned in the day you return. Excused absences will be given 2 days for every day absent to complete assignments assigned during your absence. If you are involved in extracurricular activities where you may miss class, you are expected to keep up with the course materials. Stay on top of missed work by checking the Family Portal regularly.

STUDENT: I have read this syllabus and understand what is expected of me.

Signature _____ Date _____

PARENTS: My child has discussed the syllabus with me. I understand it and will support it.

Signature _____ Date _____