



SLCA SYLLABUS 2018-19

HONORS CHEMISTRY

Mission Statement: SouthLake Christian Academy exists for the sake of God's glory and mission; proclaiming the gospel and discipling the whole person in all aspects of God's reality.

Course Description: In Honors Chemistry, students are expected to exercise independent problem-solving and lab report writing skills. In addition to understanding key concepts in chemistry, students will use critical and analytical thinking to apply key concepts and independently extend their learning. The course proceeds at a faster pace than College Prep Chemistry, going deeper into each topic and requiring a greater amount of outside-of-class work. Chemistry is the study of the composition, structure, and properties of matter and the transformation it undergoes. The course coordinates theoretical elements of the science with laboratory experimentation. Topics include general scientific method, atomic structure, bonding, chemical reactions and calculations, phases of matter, thermochemistry, and acids and bases. Students will participate in laboratory investigations, including scientific questioning, data collection, analysis, drawing conclusions, and presenting findings in lab notebooks and formal lab reports. Students will develop a greater understanding and appreciation of the order and design of God's creation. Students will take midterm and final exams.

Course Objectives – Students will:

- Use science process skills in laboratory experiments, including observation, classification, communication, metric measurement, prediction, inference and, collecting and analyzing data.
- Learn and use, on a regular basis, standard safety practices for laboratory investigations.
- Identify the significance of accurate, precise, and qualitative/quantitative measurements, use of reliable tools, safety measures.
- Learn various laboratory techniques while keeping an informative, detailed, and organized record of laboratory experiments.
- Learn fundamental chemistry concepts, including:
 - Properties of matter, and how it changes.
 - The layout and trends of the periodic table of elements.
 - How energy is conserved and transferred in chemical reactions.
 - The relationship between pressure, temperature, volume, and phase of matter.
 - How energy and matter interact in equilibrium.
- Use problem-solving skills, analyze data, apply mathematical knowledge, and develop critical thinking
- Recognize the role chemistry plays in everyday life and how an understanding of chemistry will allow them to better understand the world they live in.

Text: *Chemistry* (4th edition), BJU Press

Evaluation:

- **Homework** and class work will make up 10% of the overall grade. Homework will be assigned and checked for completion. No credit will be given for late assignments. Every unit (before every test), one homework grade from that unit is excused. All students begin the semester with a 100% homework grade. For each assignment not completed, 2 points will be subtracted.
- **Quizzes** will make up 20% of the grade. Quizzes include periodic short information assessments and most lab reports.
 - Students are expected to make up any quiz missed due to absence, according to the following policy:
 - 1 day absent (day of quiz) → make-up first day back in class
 - 2+ days absent – you have the number of days absent to make up the quiz
 - Quizzes made up on time will receive full credit. Quizzes not made up on time will receive zero credit.

- **Tests** will make up 70% of the grade and will cover the current unit of material, ranging from half a chapter up to two chapters. Formal lab reports will also count as a test grade. Each nine weeks will consist of at least three test grades.
- **Test Make-up Policy: ALL MAKE-UP TESTS WILL BE IN SHORT ANSWER OR ESSAY FORMAT!**
 - If a student comes into school late and as a result has missed a test, the student will immediately report to the office to make-up that test.
 - Students have **ONE** day for each day absent (excused) to makeup all tests and quizzes. If the test/quiz is not made up in this period, **10 pts will be deducted** from the final test/quiz grade **for each day past the makeup day**. Students should meet with their teacher(s) ASAP to request alternate arrangements if they do not have a study hall or have multiple assessments to complete.
 - All tests/quizzes are made up during the assigned test makeup period or other study hall. Students may NOT miss a scheduled class to make up a test. If students make up a test or quiz during a study hall other than the assigned test makeup period, they must go with a pass from their study hall teacher to the office to take it.
- No extra credit will be offered due to school policy. However, students will be given a bonus question on each test. Bonus points cannot be transferred to past or future tests.
- *Semester Grades will be calculated as follows:* 80% will be based on the average of two quarterly grades. 20% will be based on a final exam.

Make-up work

- When students return from an absence, it is **THEIR RESPONSIBILITY** to find out what was missed. General rule: Ask your peers FIRST for notes or missed work, then, if they don't know, ask the teacher.
- If it is a pre-planned absence, missed homework assignments or quizzes are expected to be completed prior to the absence.

Classroom Expectations:

1. Follow all rules and procedures as listed in the SouthLake handbook.
2. Respect your teacher and classmates. No talking is permitted while the teacher or another student is talking. Derogatory and discouraging language will not be tolerated.
3. Be in the classroom when the bell rings. Tardies will be recorded by the main office.
4. Be prepared for class with all necessary supplies for the day. Going to locker to get a forgotten material will be considered a tardy.
5. Do not bring food or drink into class during days that a lab is being performed. Follow all other safety rules in the lab.

Supplies required:

- A writing utensil and paper for notes and homework assignments
- A scientific calculator, NOT a graphing calculator. Can purchase at Staples or Walmart; I personally recommend the Casio FX-115 ES Plus (\$19), or the TI-30X IIS (\$13).
- A bound-page composition book (sewn-in pages, not spiral bound or tear out).
- If your last name begins with A–L, bring a pack of number 2 pencils to donate to the class pencil bank.
- If your last name begins with M–Z, bring a gallon of DISTILLED water.
- **COMPUTERS / DEVICES ARE NOT ALLOWED FOR THIS CLASS** – if a computer is needed for an assignment, or if your student has an official technology accommodation, it will be allowed, but otherwise are not to be brought to class.