

Course Name: Chemistry Honors

Duration: 1 Semester Full Year

Grade Level: 9th 10th 11th 12th (check all that apply)

Are there any prerequisites for the course?

Prerequisite: Algebra 1 (strongly encouraged)

WHAT this course is about:

Chemistry is the study of matter and its interactions. Honors Chemistry at LC is a high school chemistry class that goes a little faster, farther, and deeper than our general chemistry course. The purpose of this class is to build good chemistry foundations, problem solving, technical writing, and laboratory skills in a collaborative environment. Being open to exploring ideas, asking questions, and trying new things is a must.

WHY take this course:

Chemistry is known as the central science because we use the foundations of chemistry in all other science disciplines. This is the perfect class for students who like science and are math ready. Honors Chemistry is an excellent place for incoming freshman interested in possible careers in science to start their high school science experience. In addition, students who found interest and success in biology their freshman year often opt to take honors chemistry as a sophomore. Honors chemistry provides strong foundations in science concepts and processes that will help students in successive science courses and is a wonderful gateway into the honors and AP science pathways at LC.

WHAT you'll learn:

- Conceptual understanding of various topics in chemistry
- 21st century digital skills essential for college and career, including Microsoft EXCEL
- Technical "scientific" writing techniques
- Critical thinking and problems solving skills
- Hands-on approaches to learning, including science and engineering practices
- Applications of cross-cutting concepts, including modeling, cause and effect, proportions/quantities, energy and matter, structure and function
- Wide variety of chemistry laboratory skills
- Data collection and analysis skills

WHAT you'll do:

- Hands-on science and engineering investigations, from guided activities to open inquiry
- Evaluate data and information using data, models, diagrams, graphs, etc.
- Work collaboratively with others in a variety of thinking, processing, and hands-on activities

WHERE this could take you:

Honors Chemistry can bring about many opportunities for students and is a great entry point into the honors and AP science pathway at LC. Taking honors chemistry prepares students for the next levels of science courses, such as, foundations in chemistry that proceed biochemistry in honors and AP biology courses. The laboratory activities, along with data analysis and science writing, are essential skills that will help students regardless of their future plans.

OPTIONAL Course Outline (“scope and sequence”, sequence chart, etc.)

Honors Chemistry Learning Topics

- Atomic Structure & Change
- Periodicity
- States of Matter
- Chemical Bonding
- Chemical Reactions
- Stoichiometry
- Reaction Rates
- Equilibrium
- Acid-Base Equilibrium
- Thermodynamics