

COURSE TITLE: Honors (H) Chemistry

| Level of Difficulty | Estimated Homework | Prerequisites |
|---------------------|--------------------|---|
| Very Difficult | 60-90 minutes | District: B or better in Biology H or petition; B or better in Algebra 1, concurrent enrollment in Geometry H or higher Department Suggestion: Geometry H (at minimum concurrent enrollment) B- or better in Honors Biology and Algebra 1 |

Course Description:

Chemistry is a very rigorous course that takes a conceptual and mathematical approach to the study of matter and energy. Major topics studied first semester include the structure of matter and the arrangement of the periodic table, chemical bonding and reactions, nomenclature, quantitative analysis, and gas laws. Second semester delves into applied chemistry topics such as organic chemistry, solutions, thermochemistry, kinetics, electrochemistry, acids and bases, and nuclear chemistry.

Compared to CP Chemistry, this course covers additional and more advanced units, involves more practice in and outside of class, goes more in-depth in the chemical processes, and requires extensively more mathematical analysis.

*Compared to CP Chemistry, this course relies even more heavily on the use of algebraic expressions, graphical analysis, unit conversions, data interpretation, and word problems. Students will be expected to have a solid foundation in math (particularly algebra) that can then be applied to concepts in chemistry. **Success in previous advanced math courses is the strongest indicator of Honors Chemistry readiness.** In the honors level of this course, it is assumed students have mastered Algebra I skills, as well as unit conversions, as these are a key component to the course but will not be explicitly taught.*

The pacing of this class is very fast in comparison to CP Chemistry. Within each 85-100 minute period a new topic is covered every day resulting in a new unit every 2-3 weeks. Students are expected to be proactive in their learning and ask questions when help is needed. For example, students would need to be proactive by attending tutoring outside of class if they need help with a foundational math skill in order to understand the new chemistry material.

The classroom environment is a combination of lecture, concept demonstrations, and laboratory experiments. Students will be expected to work collaboratively in groups in a laboratory setting several times per unit.

Homework in this class is estimated at 60 minutes as a nightly average. This is a very rough estimate for planning purposes. A student's ability level and math skill level will greatly affect actual study time needed to be successful in this class. Comprehensive lab reports will be assigned in this class that will require additional outside class time to complete. Common homework assignments include textbook reading, textbook problems, worksheets and lab reports.

Grading:

The grading system is based on weighted percentages. Each assignment will have a point value within the weighted category. Assessments and labs are weighted more heavily than homework. Individual teachers may make modifications on the weighted percentages.

Syllabus:

To be provided by teacher

Supplemental Information:

This class is a prerequisite for students wishing to take IB Chemistry or IB Biology in their junior & senior year. Students must complete this class with a B- or better to advance to IB Chemistry or IB Biology 1 in the junior year.