

**Department: Science**

**Course Title: Honors Chemistry I**

**Course #: 523**

## **DESCRIPTION OF COURSE:**

Students will learn the atomic theory in depth and study the structure, composition and behavior of matter. Concepts such as stoichiometry, chemical bonding, reactions and gas laws will be presented. Students will use the scientific method of inquiry to solve problems. Through laboratory investigations, students will collect, analyze and interpret data to prepare laboratory reports. Achievement will be demonstrated through tests, quizzes, laboratory reports, homework and projects.

<b>REQUIRED TOPICS OF STUDY</b>	<b>SUGGESTED INSTRUCTIONAL TIME</b>	<b>STANDARDS/ ASSESSMENT ANCHORS</b>
<i>Safety</i>	<i>0.5 weeks</i>	<i>3.7.10.A, 3.7.12.A</i>
<i>Dimensional analysis</i>	<i>2.0 weeks</i>	<i>3.2.12.B, 3.1.12.D, 3.4.12.A, 3.4.12.B</i>
<i>Matter and Energy</i>	<i>1.5 weeks</i>	<i>3.1.12.E, 3.1.10.E, 3.2.12.A, 3.4.10.A</i>
<i>Atomic Structure and Theory</i>	<i>2.5 weeks</i>	<i>3.1.12.E, 3.1.10.E, 3.2.12.A, 3.4.10.A</i>
<i>Periodic Law and Properties</i>	<i>1.5 weeks</i>	<i>3.1.12.C, 3.2.12.A, 3.4.10.A</i>
<i>Chemical Bonding</i>	<i>2.0 weeks</i>	<i>3.4.10.A, 3.4.12.A, 3.2.10.A</i>
<i>Chemical Formulas</i>	<i>1.0 week</i>	<i>3.4.10.A, 3.4.12.A</i>
<i>Chemical Equations</i>	<i>2.0 weeks</i>	<i>3.4.10.A, 3.4.12.A</i>
<i>Stoichiometry (2)</i>	<i>3.5 weeks</i>	<i>3.4.12.A, 3.4.12.B</i>
<i>Gas laws</i>	<i>1.5 weeks</i>	<i>3.4.10.A</i>

**INSTRUCTIONAL RESOURCES: Video: Starting With Safety; Chemistry, 5<sup>th</sup> edition, by Zumdahl, Houghton Mifflin Publisher; Lab Experiments; World of Chemistry video series**