

MODESTO CITY SCHOOLS COURSE OUTLINE

Course Title	Chemistry OLL S1	Chemistry OLL S2
Course Number	OLL54201	OLL54202
Recommended Grade	<input type="checkbox"/> 7 <input type="checkbox"/> 8 <input checked="" type="checkbox"/> 9 <input checked="" type="checkbox"/> 10 <input checked="" type="checkbox"/> 11 <input checked="" type="checkbox"/> 12	
Duration	<input type="checkbox"/> Quarter <input checked="" type="checkbox"/> Semester	
Credit	<input type="checkbox"/> 2.5 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> 10	
Repeatable for Credit	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Required for Graduation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Meets Graduation Requirement	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
CALPADS Course Number	9325	
CALPADS Course Name	Chemistry	
Meets UC/CSU Requirements	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, which area? <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G	
CTE Course	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
CTE Course Level	<input type="checkbox"/> Introduction <input type="checkbox"/> Concentrator <input type="checkbox"/> Capstone N/A	
Part of a Course Pathway	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, which pathway?	
Credential Requirements		
Replaces	N/A	
Recommended Prerequisites	N/A	
Aligned to Standards Date		
Content Delivery Method	<input type="checkbox"/> Instructor Led <input checked="" type="checkbox"/> Online Provider Modesto Virtual Academy	
Other Information		
Board Approval Date		
Implementation Date	Fall 2020	

Course Description:

Required Text(s): (Title, Publisher, Year):

Supplementary Materials(s):



Course Name: Chemistry 1 v18

Course Credit: 1

Course Estimated Completion Time: 32-36 weeks

Course Description: The high school chemistry course is a two-segment study of the foundations of chemistry, building on the concepts and scientific thinking laid in middle school science. Students use scientific inquiry and higher-order problem solving as they explore the composition, properties, and changes of matter and their applications through interactive simulations, engineering solutions, and virtual and hands-on experiences. Scientific inquiry, research, experimental procedures, data collection and analysis, and making inferences are an integral part of the learning experience. In addition, technology, engineering, and mathematics (STEM) concepts are integrated throughout the course. Through phenomenon-based learning, students will be able to demonstrate a vast understanding of the importance of chemistry in the world, enabling them to apply these principles to their everyday lives and our global society.

Prerequisites: Required: Algebra 1

Honors Lessons: Yes

Course Profile (Includes Honors, if applicable)

Type of Assessment	Quantity	Location(s)
Teacher-graded	31	01.07, 01.08, 01.09, 02.03, 02.05, 02.08, 02.09, 03.05, 03.08, 04.06, 04.07, 04.08, Segment One Collaboration, S1 Enrichment Assessment 1, S1 Enrichment Assessment 2, 05.06, 05.07, 05.08, 06.02, 06.05, 06.07, 07.01, 07.04, 07.06, 07.08, 08.03, 08.06, 08.07, Segment Two Collaboration, S2 Enrichment Assessment 1, S2 Enrichment Assessment 2
Auto-graded	34	01.00, 01.02, 01.03, 01.04, 01.06, 02.00, 02.02, 02.04, 02.06, 02.07, 03.00, 03.02, 03.03, 03.06, 03.07, 04.00, 04.02, 04.03, 04.05, 05.00, 05.01, 05.02, 05.03, 05.04, 06.00, 06.03, 06.04, 07.00, 07.02, 07.03, 07.07, 08.00, 08.02, 08.05
Partial Auto-graded	37	01.01, 01.05, 01.10 (2), 02.01, 02.10 (2), 03.01, 03.04, 03.09 (2), 04.01, 04.04, 04.09 (2), 04.10 (4), 05.05, 05.09 (2), 06.01, 06.06, 06.08 (2), 07.05, 07.09 (2), 08.01, 08.04, 08.08 (2), 08.09 (4)
Discussion-Based (DBA)	8	01.09, 02.09, 03.08, 04.08, 05.08, 06.07, 07.08, 08.07
Collaboration	2	Collaboration Module
Project-based	3	02.08, 06.02, 08.06
Total Assessments	102	

Types of Assessments (Includes Honors, if applicable)

Type of Assessment	Available	Type of Assessment	Available
Multiple Choice	Yes	Essay	Yes
Worksheets	No	Collaborative	Yes
Web 2.0	Yes	Short Response	Yes
Project - Based	Yes	Labs	Yes
Self - Check	Yes	DBAs	Yes

Scope and Sequence

SEGMENT 1

Module 01—Matter

- Phenomena in Science
- The Scientific Method
- Units and Measurements
- Energy
- Properties and Changes of Matter
- Pure Substances and Mixtures
- Laboratory Investigations
- Pseudoscience

Module 02—Atoms and Elements

- Atomic Theory
- Electromagnetic Radiation
- Quantum Models
- The Periodic Table
- Periodic Trends
- Contributions to Chemistry

Module 03—Molecules and Compounds

- Valence Electrons
- Ionic and Covalent Bonding
- Nomenclature
- Molecular Structure
- Forces and Bonds
- Organic Chemistry

Module 04—Reactions

- Balancing Equations
- Types of Reactions
- Oxidation-Reduction Reactions
- Nuclear Reactions
- Radioactive Decay

SEGMENT 2

Module 05—Stoichiometry

- The Mole Concept
- Molar Mass
- Empirical Formula
- Stoichiometric Calculations
- Limiting Reactant
- Percent Yield
- Data Analysis

Module 06—Phases of Matter

- Kinetic Molecular Theory
- Phase Changes
- Gas Laws

- Ideal Gas Law
- Gas Behavior

Module 07—Energy in Reactions

- Endothermic and Exothermic
- Enthalpy Values
- Entropy
- Calorimetry
- Reaction Rates
- Equilibrium
- Le Châtelier's Principle

Module 08—Solutions

- Properties of Water
- Molarity and Dilutions
- Acids and Bases
- The pH Scale
- Energy Resources