

## MODESTO CITY SCHOOLS COURSE OUTLINE

<b>Course Title</b>	Physics I Honors OLL S1	Physics I Honors OLL S2
<b>Course Number</b>	OLL54031	OLL54032
<b>Recommended Grade</b>	<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	
<b>Duration</b>	<input type="checkbox"/> Quarter <input checked="" type="checkbox"/> Semester	
<b>Credit</b>	<input type="checkbox"/> 2.5 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> 10	
<b>Repeatable for Credit</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>Required for Graduation</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Meets Graduation Requirement</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>CALPADS Course Number</b>	9326	
<b>CALPADS Course Name</b>	Physics	
<b>Meets UC/CSU Requirements</b>	<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	
<b>CTE Course</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>CTE Course Level</b>	<input type="checkbox"/> Introduction <input type="checkbox"/> Concentrator <input type="checkbox"/> Capstone N/A	
<b>Part of a Course Pathway</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, which pathway?	
<b>Credential Requirements</b>		
<b>Replaces</b>	N/A	
<b>Recommended Prerequisites</b>	N/A	
<b>Aligned to Standards Date</b>		
<b>Content Delivery Method</b>	<input type="checkbox"/> Instructor Led <input checked="" type="checkbox"/> Online Provider Modesto Virtual Academy	
<b>Other Information</b>		
<b>Board Approval Date</b>		
<b>Implementation Date</b>	Fall 2020	

**Course Description:**

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

**Supplementary Materials(s):**



**Course Name:** Physics I v19 (GS)

**Course Credit:** 1

**Course Estimated Completion Time:** 32 - 36 weeks

**Course Description:** In each module of Physics I, students discover the contributions of scientific geniuses like Galileo, Newton, and Einstein. Through their work, students learn the concepts, theories, and laws that govern the interaction of matter, energy, and forces. From tiny atoms to galaxies with millions of stars, the universal laws of physics are explained through real-world examples. Using laboratory activities, simulations, images, and interactive elements, students follow in the footsteps of some of the world's greatest thinkers.

**Prerequisites:** Algebra I & II recommended

**Honors Lessons:** Yes

**Course Profile (Includes Honors, if applicable)**

Type of Assessment	Quantity	Location(s)
Teacher-graded	45	
Auto-graded	13	
Partial Auto-graded	18	
Discussion-Based (DBA)	6	1.22, 2.25, 3.16, 4.08, 5.11, 6.14
Collaboration	10	1.15, 2.29, 3.14, 3.20, 4.02, 5.15, 5.18, 6.04, 7.01, 7.20
Project-based	6	1.21, 1.23, 2.29, 3.20, 5.18, 7.20
Honors	7	1.02, 2.11, 3.09, 4.06, 5.06, 6.08, 7.08
<b>Total Assessments</b>	<b>76</b>	

**Types of Assessments (Includes Honors, if applicable)**

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

## Scope and Sequence

### Segment One Concepts

#### Module 1

- Plagiarism, Libel, Slander
- Theory vs. law, science vs. pseudoscience
- Measurement Techniques
- Graphical Analysis
- Experimental Techniques
- Lab Design

#### Module 2

- Speed, Velocity, Acceleration
- Problem-Solving Methods
- Vector and Scalar Quantities
- Equation Manipulation
- Free Fall and Gravity

#### Module 3

- Newton's Laws of Motion
- The Fundamental Forces
- Newton's Law of Universal Gravitation
- Coulomb's Law
- Mass and Weight
- Free-body Diagrams
- Uniform Circular Motion
- Momentum and Angular Momentum

### Segment Two Concepts

#### Module 4

- Temperature and Heat
- Conservation of Thermal Energy
- Kinetic and Potential Energy
- Work and Power

#### Module 5

- Conductors and Insulators
- Electrical Fields and Forces
- Simple, Series, and Parallel Circuits
- Schematic Diagrams

#### Module 6

- Simple Harmonic Motion
- Wave Behavior and Equation
- Ray Diagrams
- Lenses and Mirrors
- Snell's Law

#### Module 7

- Atomic Theory
- Atoms and Molecules
- Fundamental Particles
- Duality of Light
- Radioactivity
- Nuclear Fission and Nuclear Fusion
- Special Relativity and Cosmology