Palestine Independent School District
Palestine High School

Course Syllabus for
Integrated Physics and Chemistry
(Formerly Physical Science)

I. General Requirements

Students shall be awarded one credit for successful completion of this course.

II. Pre-Requisites

III. Introduction

In integrated Physics and Chemistry, students conduct laboratory investigations and fieldwork, use scientific methods during investigations, and make informed decisions using critical-thinking and scientific problem solving. This course integrates the disciplines of Physics and Chemistry in the following topics: motion, waves energy transformations, properties of matter, changes in matter, and solution chemistry. The content of this course has been vertically aligned with Chemistry I and Physics I.

Semester I/ IPC A-Chemistry

Unit 1. Safety and Science Processes

Section 1: Safety
Section 2: Exploring Science/The Nature of Science
What is Science?
Section 3: Scientific Measurements
Section 4: Scientific Tools and Equipment

Unit 2. Properties, Changes and Classification of Matter

Section 1. Properties of Matter
Section 2. Phases and Phase Changes of Matter
Section 3. Physical and Chemical Changes
Section 4. Classification of Matter

Unit 3. Atomic Structure and The Periodic Table
Section 2. Structure of the Atom
Section 3. The Periodic Table

Unit 4. Chemical Reactions

Section 1. Chemical Symbols, Formulas and Equations
Section 2. Types of Chemical Reactions
Section 3. Energy and Chemical Reaction

Semester II/IPC-B Physics

Unit 5. Force, Motion, Work, Power and Machines

Section 1. Force
Section 2. Motion
Section 3. Work
Section 4. Power
Section 5. Machines

Unit 6. Waves

Section 1. Properties and Characteristics of Waves
Section 2. Type and Classification of Waves

Unit 7. Energy and Energy Transformation

Section 1. Nature of Energy
Section 2. Kinetic and Potential Energy
Section 3. Energy Conversion
Section 4. Energy Transformation
Section 5. Energy Conservation
Section 6. Electricity
Section 7. Magnetism