

Course SLOs aligned with Program SLOs

San Mateo CCCD

CAN Program - Physical Sciences

Use the scientific method and appreciate its importance to the development of scientific thought.

CAN Dept - Earth Science

CAN GEOL 100 - Introduction to Geology

Course Outcomes:

- * Scientific Method and the Plate Tectonic Theory - Student will demonstrate an understanding of the application of the Scientific Method in the development of the Theory of Plate Tectonics. (Created By CAN Dept - Earth Science)

CAN GEOL 101 - Geology Laboratory

Course Outcomes:

- * Scientific Method - Students will be able to use the scientific method to analyze and interpret data. (Created By CAN Dept - Earth Science)

CAN OCEN 100 - Oceanography

Course Outcomes:

- * Environmental Oceanography - Students will investigate at least one threat to the health of the oceans and its inhabitants. (Created By CAN Dept - Earth Science)
- * Marine Geology and Plate Tectonics - Students will use an understanding of plate tectonics to explain the formation and evolution of the ocean basins. (Created By CAN Dept - Earth Science)
- * Physical Oceanography - Students will demonstrate an understanding of the interaction between the atmosphere and ocean and its implications to the formation of winds, currents, and waves. (Created By CAN Dept - Earth Science)
- * Scientific Method and the Theory of Plate Tectonics - Students will demonstrate an understanding of the application of the Scientific Method to the development of the Theory of Plate Tectonics. (Created By CAN Dept - Earth Science)
- * Seawater Chemistry - Students will use basic ideas of chemistry to describe the formation of salts and the differences between the major and minor components of seawater. (Created By CAN Dept - Earth Science)

CAN OCEN 101 - Oceanography Lab/Field Study

Course Outcomes:

- * Chemical Nature of Seawater - Using standard chemical apparatus, students will be able to determine the salinity of seawater samples and apply this knowledge to an understanding of the chemistry of the world's oceans. (Created By CAN Dept - Earth Science)
- * Life in The Ocean - Students will demonstrate an understanding of food webs, adaptation, and ecosystems through analysis of living organisms and marine biological data. (Created By CAN Dept - Earth Science)
- * Marine Biology - Students will demonstrate an understanding of food webs, adaptation, and ecosystems through analysis of living organisms and marine biological data. (Created By CAN Dept - Earth Science)
- * Marine Geology and Evolution of the Ocean Basins - Students will demonstrate an understanding of plate tectonics and its role in the formation and evolution of the ocean basins. Student will also be able to analyze sediments using standard oceanographic tools and effectively communicate their results. (Created By CAN Dept - Earth Science)
- * Physical Oceanography - Students will be able to integrate and interpret oceanographic data to investigate real world issues relating to currents, waves, and tides. (Created By CAN Dept - Earth Science)
- * Physics of the Ocean - Students will be able to integrate and interpret oceanographic data to investigate real world issues relating to currents, waves, and tides. (Created By CAN Dept - Earth Science)
- * tides - describe tides and their causes

(Created By CAN Dept - Earth Science)

Document and communicate their work effectively.

CAN Dept - Earth Science

CAN GEOL 101 - Geology Laboratory

Course Outcomes:

- * California Geology - Student will use geologic knowledge to explain the tectonic setting and geologic resources of California. (Created By CAN Dept - Earth Science)

CAN OCEN 100 - Oceanography

Course Outcomes:

- * Environmental Oceanography - Students will investigate at least one threat to the health of the oceans and its inhabitants. (Created By CAN Dept - Earth Science)
- * Marine Biology - Students will apply the concepts of food webs, adaptation, and communities to the marine ecosystem. (Created By CAN Dept - Earth Science)

CAN OCEN 101 - Oceanography Lab/Field Study

Course Outcomes:

- * Chemical Oceanography - Using oceanographic and chemical apparatus, students will determine the salinity of seawater samples and apply this knowledge to an understanding of the seawater chemistry of the world's oceans. (Created By CAN Dept - Earth Science)
- * Life in The Ocean - Students will demonstrate an understanding of food webs, adaptation, and ecosystems through analysis of living organisms and marine biological data. (Created By CAN Dept - Earth Science)
- * Marine Biology - Students will demonstrate an understanding of food webs, adaptation, and ecosystems through analysis of living organisms and marine biological data. (Created By CAN Dept - Earth Science)
- * Physical Oceanography - Students will be able to integrate and interpret oceanographic data to investigate real world issues relating to currents, waves, and tides. (Created By CAN Dept - Earth Science)
- * tides - describe tides and their causes

(Created By CAN Dept - Earth Science)

Demonstrate critical thinking to analyze physical systems in terms of scientific concepts.

CAN Dept - Earth Science

CAN GEOL 100 - Introduction to Geology

Course Outcomes:

- * Application of the Plate Tectonic Theory to Understanding Geologic Phenomena - Student will use the Theory of Plate Tectonics to explain the cause of geologic phenomena such as earthquakes, volcanoes, and mountain building. (Created By CAN Dept - Earth Science)
- * Geologic Time - Students will use standard geologic principles to determine the geologic history of a simple geologic cross-section. (Created By CAN Dept - Earth Science)
- * Minerals and the Rock Cycle - Students will demonstrate an understanding of the formation of common rocks and minerals, their relationship to geologic phenomena, and how they change as their environment changes. (Created By CAN Dept - Earth Science)
- * The hydrologic cycle and its effect on Earth's surface - Student will apply the concept of the hydrologic cycle to explain the evolution of the present landscape through the work of moving water, landslids, glaciers, and wind. (Created By CAN Dept - Earth Science)

CAN GEOL 101 - Geology Laboratory

Course Outcomes:

- * identification of rocks and minerals - Using an identification key, hand lenses, hardness samples, and acid, students will be able to identify and determine the probable mode of origin of common rocks and minerals. (Created By CAN Dept - Earth Science)
- * Map Skills - Students will be able to use topographic and geologic maps to solve geologic problems (Created By CAN Dept - Earth Science)
- * Scientific Method - Students will be able to use the scientific method to analyze and interpret data. (Created By CAN Dept - Earth Science)

CAN OCEN 100 - Oceanography

Course Outcomes:

- * Environmental Oceanography - Students will investigate at least one threat to the health of the oceans and its inhabitants. (Created By CAN Dept - Earth Science)
- * Marine Biology - Students will apply the concepts of food webs, adaptation, and communities to the marine ecosystem. (Created By CAN Dept - Earth Science)
- * Marine Geology and Plate Tectonics - Students will use an understanding of plate tectonics to explain the formation and evolution of the ocean basins. (Created By CAN Dept - Earth Science)
- * Physical Oceanography - Students will demonstrate an understanding of the interaction between the atmosphere and ocean and its implications to the formation of winds, currents, and waves. (Created By CAN Dept - Earth Science)
- * Seawater Chemistry - Students will use basic ideas of chemistry to describe the formation of salts and the differences between the major and minor components of seawater. (Created By CAN Dept - Earth Science)

CAN OCEN 101 - Oceanography Lab/Field Study

Course Outcomes:

- * Chart and map skills - Students will read and analyze maps and nautical charts to obtain oceanographic data. (Created By CAN Dept - Earth Science)
- * Chemical Nature of Seawater - Using standard chemical apparatus, students will be able to determine the salinity of seawater samples and apply this knowledge to an understanding of the chemistry of the world's oceans. (Created By CAN Dept - Earth Science)
- * Chemical Oceanography - Using oceanographic and chemical apparatus, students will determine the salinity of seawater samples and apply this knowledge to an understanding of the seawater chemistry of the world's oceans. (Created By CAN Dept - Earth Science)
- * identify organisms - identify marine organisms using a key (Created By CAN Dept - Earth Science)
- * Life in The Ocean - Students will demonstrate an understanding of food webs, adaptation, and ecosystems through analysis of living organisms and marine biological data. (Created By CAN Dept - Earth Science)
- * Marine Biology - Students will demonstrate an understanding of food webs, adaptation, and ecosystems through analysis of living organisms and marine biological data. (Created By CAN Dept - Earth Science)
- * Marine Geology and Evolution of the Ocean Basins - Students will demonstrate an understanding of plate tectonics and its role in the formation and

evolution of the ocean basins. Student will also be able to analyze sediments using standard oceanographic tools and effectively communicate their results.

(Created By CAN Dept - Earth Science)

* Physical Oceanography - Students will be able to integrate and interpret oceanographic data to investigate real world issues relating to currents, waves, and tides. (Created By CAN Dept - Earth Science)

* Physics of the Ocean - Students will be able to integrate and interpret oceanographic data to investigate real world issues relating to currents, waves, and tides. (Created By CAN Dept - Earth Science)

* tides - describe tides and their causes

(Created By CAN Dept - Earth Science)