SCI 110 – Introduction to Physical Science

Course Description

Introduces the student to basic concepts from the physical sciences such as motion, force, energy, heat, electricity, magnetism and the atomic theory of matter. Discusses the scientific principles that underlie everyday phenomena, modern technologies, and planetary processes. Examines how the various branches of science, such as physics, chemistry, geology, meteorology, astronomy, relate to each another. Lab portion of the course reinforces basic concepts.

Instructional Materials

Krauskopf, K., & Beiser, A. (2014). *The Physical Universe* (15th ed.). New York, NY: McGraw Hill.

Course Learning Outcomes

1. Describe the characteristic values and procedures of the physical sciences.
2. Apply concepts in physical sciences to evaluate current trends and issues in the modern world.
3. Give examples of how the physical laws governing motion, waves, energy, and heat relate to everyday phenomena.
4. Describe the properties of electricity, magnetism, and electromagnetic radiation.
5. Describe the physical basis for nuclear technologies.
6. Explain the relationships between the Periodic Table of Elements, the inner structure of atoms, and the chemical properties of substances.
7. Analyze the physical structures, properties, and processes that shape the Earth and their associated natural hazards.
8. Describe the physical processes influencing climate and weather, including the roles of natural and anthropogenic activity on climate.
9. Evaluate how research is conducted on extraterrestrial bodies.
10. Discuss what is known about the life cycles of stars, galaxies, and the universe.
11. Use technology and information resources to research issues in physical sciences.
12. Write clearly and concisely about physical sciences using proper writing mechanics.