Department:

Physical Science

Course Description:

This course provides an introduction to the major concepts in modern science. The course will focus on physics, chemistry, meteorology, astronomy, energy, and the environment. The course will include laboratory experiments and work with lab equipment and techniques.

Course Competencies:

The learning outcomes and competencies detailed in this syllabus meet or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Groups for this course as approved by the Kansas Board of Regents. (Kansas Regents Shared Number Course and Title: KRSN Course PSI 1010 Physical Science I and Lab.)

Upon completion of the course, the student should be able to:

1. Explain and use the scientific method.
2. Select appropriate units of measure and apply measurement methods to help convey concepts of phenomena in the physical environment.
3. Describe the concepts of motion, force, momentum, work, power, and energy in everyday experience.
4. Describe the effects of heat on a molecular level and calculate this effect in the heat exchange process.
5. Describe the properties of wave energy forms and explain how they affect everyday experience.
6. Develop a parallel and a series circuit and identify the current and resistance effect in each.
7. Describe the electrical energy in a home environment and calculate the electrical charge for this energy.
8. Use concepts of motion, location, and appropriate terminology to give a brief description of the universe.
9. Relate the position of celestial objects to the measurement of time and day.
10. Explain weather symbols and factors in terms of media forecasts.
11. Summarize and evaluate science articles written for the general public.

Course Content:

A. Measurement
B. Motion
C. Forces
D. Work and Energy
E. Temperature and Heat
F. Wave and Wave Effects
G. Solar System, Place and Time
H. Moon and Universe
I. Atmosphere, Winds, and Clouds
J. Weather Forecasting
K. Atoms and Compounds
L. Electricity

Learning Assessments:
Course competencies will be assessed by use of in-class assignments, lab work and reports, quizzes, exams, and a comprehensive final exam.

Instructional Materials:

Guidelines for Requesting Accommodations Based on Documented Disability or Medical Condition

It is the intention of Highland Community College to work toward full compliance with the Americans with Disabilities Act, to make instructional programs accessible to all people, and to provide reasonable accommodations according to the law.

Students should understand that it is their responsibility to self-identify their need(s) for accommodation and that they must provide current, comprehensive diagnosis of a specific disability or medical condition from a qualified professional in order to receive services. Documentation must include specific recommendations for accommodation(s). Documentation should be provided in a timely manner prior to or early in the semester so that the requested accommodation can be considered and, if warranted, arranged.

In order to begin the process all students must complete the “Disabilities Self-Identification Form” at this link: https://highlandcc.edu/pages/disability-services.

This form can also be accessed at the Highland Community College homepage under Students Services/Student Resources/Disability Service or by contacting the Disabilities Coordinator.