

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 PSI1010 Physical Science and Lab.**)

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

1. Explain the scientific method.
2. Describe the scope of the physical sciences.
3. Interpret scientific data to demonstrate basic problem solving.
4. Explain everyday phenomena in terms of basic physical science concepts.
5. Explain and critique science as presented in the media.
6. Perform measurements using physical apparatus.
7. Analyze the collected data including appropriate treatment of errors and uncertainties.
8. Generate and communicate conclusions based on the data and analysis for experimental investigations.

Course Content:

- A. Scientific Method and Measurement
- B. Motion
- C. Forces
- D. Work and Energy
- E. Temperature, Heat and Thermodynamics
- F. Wave and Wave Effects
- G. Electromagnetism
- H. Electromagnetic Radiation
- I. Atoms and Periodic Properties
- J. Chemical Compounds
- K. Chemical Reactions
- L. Nuclear Reactions
- M. Earth and Moon
- N. Solar System
- O. Stars and Stellar Evolution
- P. Plate Tectonics
- Q. Internal Geologic Processes

- R. Surficial Geologic Processes
- S. Atmosphere and Weather

Learning Assessments:

Course competencies will be assessed by use of exams, quizzes, and lab reports.

Instructional Materials:

Textbook: Tillery, B., Slater, S., & Slater, T. (2017). *Physical Science* (11th ed.). New York, NY: McGraw-Hill. ISBN-13: 978-0077862626

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” on our [Disability Services website](#).

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.

A Note on Harassment, Discrimination and Sexual Misconduct

Highland Community College seeks to assure all community members learn and work in a welcoming and inclusive environment. Title VII, Title IX, and College policy prohibit harassment, discrimination and sexual misconduct. Highland Community College encourages anyone experiencing harassment, discrimination or sexual misconduct to talk to report to the Vice President for Student Services, the Human Resources Director or complete an [online report](#) about what happened so that they can get the support they need and Highland Community College can respond appropriately.

There are both confidential and non-confidential resources and reporting options available to you. Highland Community College is legally obligated to respond to reports of sexual misconduct, and therefore we cannot guarantee the confidentiality of a report, unless made to a confidential resource. Responses may vary from support services to formal investigations. As a faculty member, I am required to report incidents of sexual misconduct and thus cannot guarantee confidentiality. I must provide our Title IX coordinator with relevant details such as the names of those involved in the incident. For more information about policies and resources or reporting options, please review our [Equity Grievance Policy](#).