

I. COURSE INFORMATION

- A. Physical Science 120 Physical Science
- B. 5 credit hours
- C. Krauskopf, Konrad B. & Arther Beiser. *The Physical Universe*. 16th ed. New York: McGraw Hill, 2017
- D. Prerequisites: Eligible for COL 101 English Composition I or completion of COL 101
- E. KRSN: PSI 1010 Physical Science and Lab

The learning outcomes and competencies detailed in this course outline or syllabus meet or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Groups project for this course as approved by the Kansas Board of Regents.

II. COURSE DESCRIPTION

Physical Science is an integrated lecture and laboratory course designed for non-physical science majors seeking to learn basic physical science concepts. The course will cover the physical process of Earth as it exists in the solar system. Topics investigated include, but are not limited to, physics topics of energy and motion, electricity and waves, modern physics, and introductory chemistry concepts from the perspective of physics. These lessons will be applied to composite sciences which may include geology, astronomy, oceanography, atmosphere and climate, and environmental science.

III. LEARNING OUTCOMES

- A. Explain the scientific method
- B. Describe the scope of physical sciences
- C. Interpret scientific data to demonstrate basic problem solving
- D. Explain everyday phenomena in terms for basic physical concepts
- E. Explain and critique science as presented in the media
- F. Perform measurements using physical apparatus
- G. Analyze the collected data including appropriate treatment of errors and uncertainties
- H. Generate and communicate conclusions based on the data and analysis for experimental investigations

IV. MAJOR CONTENT AREAS

- A. Physical quantities
- B. Newton's law
- C. Work and energy
- D. Continuum mechanics
- E. Thermal properties
- F. Chemistry
- G. Geology
- H. Astronomy
- I. Meteorology
- J. Environmental Science

V. ASSIGNMENTS (may include but are not limited to)

- A. Reading assignments
- B. Writing assignments

- C. Discussions
- D. Projects

VI. EVALUATION METHODS (may include but are not limited to)

- A. Attendance and participation
- B. Assignments
- C. Quizzes and exams
- D. Lab reports