

University of Arkansas - Fort Smith

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General Syllabus

PHSC 10031 Physical Science Lab

Credit Hours: 1 Lecture Hours: 0 Laboratory or other types of Hours: 2

Prerequisite or Corequisite: PHSC 10043 Physical Science

Effective Catalog: 2026

I. Course Information

A. Catalog Description

A study in physical science techniques and analyzing physical sciences concepts in the disciplines of physics and chemistry.

II. Student Learning Outcomes

A. Subject Matter

Upon successful completion of Physical Science Lab, the student will be able to:

1. Make measurements and express them with correct mathematical notation.
2. Calculate the work, energy, and power for mechanical forces.
3. Measure quantities associated with heat and temperature.
4. Determine the quantities associated with wave motion.
5. Describe and measure the effects of electricity and magnetism.
6. Describe the relationships of the chemical elements.

B. University Learning Outcomes

Physical Science Lab enhances student abilities in the following areas:

Analytical Skills

Critical Thinking Skills:

Students will identify a problem or issue and will research, evaluate, and compare information from varying sources in order to evaluate authority, accuracy, recency, and bias relevant to the problems/issues. The student will generate solutions/analysis of problems/issues evaluated and will assess and

justify the solutions and/or analysis.

Communication Skills (written and oral):

Students will communicate proficiently. The student will compose coherent documents appropriate to the intended audience and effectively communicate orally in a public setting.

III. Major Course Topics

- A. Introduction to Science
- B. Graphs
- C. Measurements
- D. Uniform Motion
- E. Newton's Second Law
- F. Centripetal Acceleration and Force
- G. Laws of Equilibrium
- H. Specific Heat
- I. Waves
- J. Lenses and Prisms
- K. Static Electricity; Magnetism
- L. Spectroscopy
- M. Oxygen