PHSC 2105

Division: Natural Science and Mathematics
Department: Physics
Course: PHSC 2105
Title: Honors Physical Science Laboratory
Catalog Description:

This course counts as a physical science lab credit for students enrolled in the physical science classes in the Honors Program: PHYS 2100 and GEO 2100.
Students will do elementary experiments in physics, geology, and astronomy.

General Education Requirements: Physical Science Lab
Semesters Offered: Fall
Credit/Time Requirement: Credit: 1; Lecture: 0; Lab: 2
Clock/Hour Requirements: 0
Offered for Non-Credit: No
Corequisites: GEO 2100, PHYS 2100

Justification:

This course helps students in the Honors Program complete their General Education requirements by giving them the opportunity to take a physical science lab class with their other physical science honors classes.
It is NOT equivalent to any class at any other USHE institution, but would count towards the GE requirements for an AS or AA, and it would transfer as elective credit.

Student Learning Outcomes:

1. Students will apply the experimental method to determine the relationships between physical variables.

2. Students will understand how physical scientists think and form judgments about the physical world.

3. Students will be able to construct and interpret graphs of scientific data.

Content:

Accuracy and Precision

Free Fall Acceleration

Forces, Torques

Harmonic motion

Lenses and image formation

Electrical Circuits

Radioactivity

Astronomy observation

Rock and Mineral Identification

Uniformitarianism

Fossil Identification

Geochronology

Plate Tectonics

Fossil Record

General Education Outcomes:

6) Apply computational skills to a variety of contexts.

Students will be able to make and read graphs of scientific data.

7) Apply scientific reasoning to a variety of contexts.

1. Students will understand how physical scientists think and form judgments about the physical world.

2. Students will be able to construct and intepret graphs of scientific data.

Key Performance Indicators:

1. Scores on selected labs

2. Posttest

3. A) Scores on selected labs

B) Graphing literacy survey

Representative Text and/or Supplies:

In-house laboratory manual.

Optimum Class Size: 15
Maximum Class Size: 24

Signatures:

I hereby submit this course syllabus:

Larry Smith, PhD, Professor

I hereby find this course consistent with the goals and resources of the Physics Department:

Ted Olson, , Professor, Chair

I hereby find this course consistent with the goals and resources of the Natural Science and Mathematics Division:

Dan Black, EdD, Associate Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)