

## SYLLABUS -- Fall 2024

**Course Title:** PHYS 1315 – 200 Introduction to Basic Science.

**Semester/Year:** Fall 2024

**Instructor:** Caylene Caddell My email is [Cmatswin@aol.com](mailto:Cmatswin@aol.com)  
Home phone: 794-7644 Cell PHONE: (806)789-9101. Call anytime you need to - always leave a message, and I will return your call. (The cell number is the best one to call)

**Office Location:** Students can make arrangements to meet the instructor before or after class when needed

**Course Description:** A basic non-laboratory survey course serving to introduce and integrate the fundamental concepts of Chemistry, Physics, Geology, and Biology. PHYS 1315 does not satisfy a laboratory science requirement.

**Course Goals:** (1) Increase vocabulary of scientific terms. (2) Improve understanding of science as it applies to everyday experiences. (3) Recognize the importance of various branches of science and how they relate to each other.

**Text and Other Materials:** Not Required

[South Plains College Syllabus Statements](#)

[2024-2025 Academic Calendar](#)

\*\*\* “ ANY STUDENT WHO, BECAUSE OF A DISABILITY, MAY REQUIRE SOME SPECIAL ARRANGEMENTS IN ORDER TO MEET COURSE REQUIREMENTS SHOULD CONTACT THE INSTRUCTOR AS SOON AS POSSIBLE TO MAKE NECESSARY ACCOMMODATIONS.” \*\*\*

**Attendance:** You are expected to be in attendance at each class meeting - failure to attend class can result in your being dropped from the class.

**Examination Policy:** Four unit exams and the final - exams will be objective in nature and will include matching, multiple choice, true/false, fill in the blank, and short answer type questions. If you miss an exam, it may be made up during the week following the exam date.

**Determination of Grade:** 4 Unit tests and the final exam. Each counts 20% of the final grade. Final grade based on the following: 90-100=A, 80-89=B, 70-79=C, 60-69=D, 59-below=F.

SCANS Foundation and Competence Skills: (see attachment) 1,2,4,10,11,12

## **Content Outline:**

### **Unit 1 - Physics**

*Unit Objectives: Students will be able to (1) state the fundamental quantities of nature, (2) Convert from standard measurement to metric measurement, (3) Distinguish between speed and velocity, (4) Define the two types of waves, (6) State properties of waves, (7) State Newton's laws of nature.*

**Week 1** – Introduction to Physics  
Chapter 1 – Measurement  
Chapter 2 – Force and Movement  
Chapter 3 – Force and Energy

**Week 2** – Labor Day

**Week 3** - Review chapters 1-3  
Chapter 4 Work  
Chapter 6 - Waves

**Week 4** - Review chapters 4 & 6  
Chapter 7 - Wave Effects  
Physics Test Review

**Week 5 - TEST - PHYSICS**  
Introduction to Chemistry

### **Unit 2 - Chemistry**

*Unit Objectives: Students will be able to (1) Describe the chemical classification of matter, (2) Using the Periodic Table tell an element's atomic number, atomic mass, number of protons, and number of electrons, (3) Name simple compounds, and know the uses of some compounds and elements, (4) State the octet rule, (5) State properties of ionic and covalent bonds.*

**Week 6** - Chapter 11 - The Periodic Table  
Chapter 12 - Compounds, Molecules, Ions

**Week 7-** Review chapters 11 & 12  
Chapter 13 - Chemical Reactions  
Phases of Matter  
Chemistry Test Review

**Week 8 - TEST - CHEMISTRY**  
Introduction to Astronomy/Geology

### **UNIT 3 - Astronomy/Geology**

*Unit Objectives: Students will be able to (1) Describe the shape, motions, relative size, and positions of the objects that make up the solar system, (2) List the terrestrial planets and the Jovian planets, and state ways in which they are different, (3) Describe and differentiate among comets, asteroids, and meteoroids.*

**Week 9** - Chapter 16 - the Solar System  
Chapter 25 - the Atmosphere  
Chapter 26 - Atmospheric Effects

**Week 10** - Review chapters 16, 25 & 26  
Chapter 20 - Minerals and Rocks  
Chapter 21 - Structural Geology  
Test Review - Astronomy/Geology

**Week 11 - TEST - ASTRONOMY/GEOLOGY**  
Introduction to Biology

### **Unit 4 - Biology**

*Unit Objectives: The students will be able to (1) Give the three parts of the Cell Theory (2) Label the parts of a cell, (3) Determine the probability of the outcome of various genetic crosses, (4) Show the relationship of photosynthesis and respiration, (5) Differentiate between mitosis and meiosis.*

**Week 12** - Classification  
The Cell - Cell Division  
Asexual - Sexual Reproduction

**Week 13** - Photosynthesis - Respiration  
Basic Genetics

**Week 14** - Basic Genetics - Punnett Square  
Biology Test Review

**Week 15 - BIOLOGY TEST**  
Review - Final Exam

**Week 16 - FINAL EXAM**