



Southern Arkansas University Tech

P.O. Box 3499 ~ Camden, AR 71711

870.574.4453 or 870.574.4586

www.sautech.edu

ONLINE COURSE INFORMATION SHEET

Course Number: PHSC2023

Course Title: The Physical Sciences

Course Description: A course in the principles of physical science designed for general education. This course satisfies the 3 semester-credit-hour, science requirement for most schools. The lab is a separate course (PHSC2021).

Instructor: Steve Candler

Instructor Bio: AAS Colorado Technical College, BS University of Arkansas at Monticello, MA Southern Arkansas University

Prerequisite: eligible to take Composition I or have completed all appropriate Reading and Writing courses

Textbook Title: Physical Science, 10th Ed., Tillery.

Learning Outcomes:

- A. Provide students a general Science base
 - a. Identify general scientific terms
 - b. Solve problems involving area, volume, and density
 - c. Describe the Scientific Method and use it to solve a problem.
 - d. List and properly use standard and derived English and Metric units of measurement throughout the course.
- B. Provide students a Physics base
 - a. Define displacement, speed, velocity, acceleration, force, momentum, impulse, and use them to solve problems.
 - b. List Newton's Laws of Motion and use them to solve problems.
 - c. Use the concepts of work, gravitational potential energy, and kinetic energy to solve problems.
 - d. Describe the relationship between heat and temperature using the kinetic molecular theory.
 - e. Describe the Fahrenheit, Celsius, and Kelvin temperature scales.
 - f. Define conduction, convection, and radiation.
 - g. Solve heat transfer problems including phase change problems.
 - h. Define terms associated with vibrations, waves, and sound.
 - i. Define/describe electrical current, voltage, resistance, power, Ohm's Law, and Watt's Law, and use them to solve problems.
 - j. Define terms associated with magnetism.
 - k. Describe the relationship between electricity and magnetism.
 - l. Define reflection, refraction, and dispersion.
- C. Provide students a Chemistry base
 - a. Identify and describe the major elementary particles in atoms.
 - b. Identify characteristics of assigned chemical families of elements.
 - c. Define/Describe atomic number, atomic mass, mixture, compound, molecule, isotope, chemical bond, and the Periodic Law.
 - d. Describe the parts of a chemical equation.
 - e. Describe Ionic, Covalent, and Metallic Bonds
 - f. Given a simple chemical equation, describe the chemical reaction.
 - g. Balance simple chemical equations.

On-Campus Requirement

The final exam must be taken at an approved proctor site. Visit the college website at www.sautech.edu for detailed information.

Modes of Interaction

Entirely on line, self-paced, provided course deadlines are met. Students must maintain contact with instructor and make progress in the course at least every two weeks (every week during the Summer Session). Work must be submitted to the instructor before deadlines listed within the course.

Methods of Assessment

All on line, multiple choice and problems. Final exam at a proctored location.

Enrollment Procedures

SAU Tech is an open admissions college; however, we have several items that you must provide in order to be admitted:

- Submit application for admission.
- Submit a high school transcript or GED, and official college transcripts from all previously attended colleges (if applicable).
- Provide proof of two immunizations against measles, mumps and rubella.
- Take a placement test. Students enrolling must submit ACT, SAT, ASSET or COMPASS scores. Students can take the ASSET or COMPASS test at SAU Tech.

Students are responsible for all tuition and fees at the time of registration. Students must officially drop by written notice or in person in order to reduce their balance owed. If students never attend class, he/she will still be assessed partial tuition and full student processing fees, unless he/she completely withdraws during the 100% refund period.

In order for a student to drop a class, he/she must complete a drop form or send written request to his/her advisor. A \$10 drop fee is assessed for drops that take place after the registration period ends.

Admissions Office Website: <http://www.sautech.edu/studentResources/admissions.aspx>

Course Registration Website: <http://www.sautech.edu/studentResources/advising.aspx>

Technical Requirements and Resources: Students will need Internet access and have the ability to send and receive e-mail attachments using the e-mail within Blackboard.

Library Website: <http://www.sautech.edu/lrc/index.aspx>

Bookstore Website: <http://sautech.textbooktech.com>

Adult Learner Resources: Online library and bookstore services can be obtained at the library and bookstore websites. Advising services can be obtained at <http://www.sautech.edu/studentResources/advising.aspx>.

Student Support and Learning Resources Online library and bookstore services can be obtained at the library and bookstore websites. Advising services can be obtained at <http://www.sautech.edu/studentResources/advising.aspx>.

Other Considerations

Prior computer skills are essential for success in an online class. Prior to enrolling in an online class, you should be able to:

- Surf the Internet and download web pages
- E-mail and attach files and know proper e-mail etiquette
- Use Microsoft Word skills and submit papers with correct format, grammar and spelling

All first time online students are required to complete Learning Strategies before they will be allowed to take their online course(s). The purpose of Learning Strategies is to teach students how to use Blackboard and provide information about other systems that students will use while a student at SAU Tech.

There are computer programs and other things that you will need if you are taking an online course from SAU Tech. To make it easier for you, we have compiled a list of these things. Before beginning your online course, you should go ahead and make sure each of these programs listed below are loaded on every computer that you will use while taking your online course(s).

- **Microsoft Word** – used to complete assignments and submit to instructor
 - Can be accessed via SkyDrive inside your student email account. **FREE**
 - Can be purchased from Wal Mart or other software vendor and will need to be loaded on to your computer
 - There is also a **free** product that works just as good as the Microsoft Office Suite. You can download it at <http://download.openoffice.fm/free/?pk=26976>
- **Adobe Reader 7.0 or higher** – used to read files in pdf format
 - Cost: Free
 - Can be downloaded to your computer from <http://www.adobe.com/products/acrobat/readstep2.html>
- **Adobe Flash Player (7 or higher)** – used to view study activities and demonstrations in Learning Strategies course
 - Cost: Free
 - Can be downloaded to your computer from http://www.adobe.com/shockwave/download/download.cgi?P1_Prod_Version=ShockwaveFlash
- **Macromedia Shockwave Player 8.5.1** – used for interactive quizzes, animations and activities
 - Cost: Free
 - Can be downloaded to your computer from

<http://www.macromedia.com/shockwave/download/download.cgi?>

- Windows Media Player – used to listen play audio files
 - Cost: Free
 - Comes as part of your Windows operating system
- Java – a technology that is required in order for Blackboard to function properly as well as some other programs that SAU Tech uses with its online classes (**Note: Only one version of Java can be running on your computer at a time.**)
 - Cost: Free
 - Can be downloaded to your computer from
<http://javashopl.m.sun.com/ECom/docs/Welcome.jsp?StoreId=22&PartDetailId=jre->