Instructor Information

Instructor: Josh Manley
Office: SCIB 115
Mailbox: South campus Adjunct Office
Hours: By appointment only
Phone: 501-812-2269
Email: jmanley@uaptc.edu

*All emails and telephone calls will receive a response within two business days.

Chair: Thomas Russell 501-812-2705 trussell@uaptc.edu
Dean: Dr. Marico Bryant 501-812-2200 mbryanthowe@uaptc.edu

*If your emails and telephone calls do not receive a response within two business days, the appropriate chain of command is above.

Course Information

Lecture: TR 10:50 AM-12:05 PM Little Rock-South Room 219
Lab: R 12:10 PM-2:00 PM Little Rock-South Room 211

Catalog Description
This is a general survey course of the physical sciences designed for general education. Course topics include physics and chemistry and may also include other physical science topics. Lab is required. Prerequisite: A score of 22 or above on the Math section of the ACT, or a score of 97 or above on the Accuplacer Elementary Algebra test, or a score of 50 or above on the COMPASS Math Placement test, or completion of all required zero (0) level mathematics coursework. 3 lecture hours, 2 lab hours.

Course Materials

Textbook:
Author(s): Robinson et al.
Publisher: OpenStax
Description: Online textbook found at https://openstax.org/details/books/chemistry-atoms-first

Author(s): Urone; Hinrichs; Dirks; Sharma
Publisher: OpenStax
Description: Online textbook found at https://openstax.org/details/books/college-physics

Laboratory Manual:

Mission Statement
University of Arkansas – Pulaski Technical College provides access to high-quality education that promotes student learning and enables individuals to develop to their fullest potential.

Institutional Learning Outcomes and General Education

UA-PTC supports a college-wide institutional learning assessment program which concerns effective instructional methods and promotes student learning achievement by assessing:

1. Communication
2. Critical Thinking
3. Cultural Awareness
4. Information Literacy
5. Professionalism
6. Quantitative Literacy
7. Technology Literacy

For more information, please consult the following website: https://uaptc.edu/sla

Department / Discipline or Program Learning Outcomes

The Physical Science Department, consistent with the College’s mission and the Division’s objectives, encourages the success of its students in the health related fields and academic disciplines emphasizing Critical Thinking and Quantitative Literacy by the following program outcomes:

1. The student will realize the definition of the specific discipline under study.
2. The student will assign and demonstrate the use of significant figures in numbers used in calculations resulting in values and units dictated by the rules of significant figures.
3. The student will begin with measurement values and units and make unit conversions between the Metric and American systems.
4. The student will build a pictorial and mental model of the chemical elements based on their internal and external structure.
5. The student will generate the appropriate electron configuration in both neutral and charged elements for use in making compounds.
6. The student will apply the rules of naming compounds to include ionic, covalent, acids, and bases.
7. The student will utilize the attractive properties of elements and ions in the formation of both the ionic and covalent bond.
8. The student will arrange both ionic and covalent compounds and some elements in the appropriate form of a balanced chemical equation.
9. The student will apply the mole concept to the balanced chemical equation to calculate the amounts of substances that are involved during a chemical change.
10. The student will calculate physical quantities including force, momentum, energy, displacement, velocity, acceleration, and density.
11. The student will employ the use of conservation of mass, conservation of heat, and conservation of momentum in both laboratory experiments and through theoretical calculation.
12. The student will demonstrate proficiency in understanding resistance, voltage, amperage, power, and simple circuits in series and in parallel.
Student Learning / Course Outcomes
The student will explain, describe, discuss, recognize, and/or apply knowledge and understanding of the following:

Early Atomic Theory and its Evolution
Atomic Structure and Symbols and The Periodic Table
Electromagnetic Energy and Electron Configuration
Scientific method
Molecular and Ionic Compounds
Ionic Bonding and Covalent Bonding
Chemical Nomenclature
Lewis Symbols
Formula Mass and Determining Empirical and Molecular Formula
Molarity
Balancing Equations
Physical Quantities and Units
Accuracy, Precision, and Significant Figures
Vectors, Scalars, and Coordinate Systems
Time, Velocity, and Speed
Acceleration
Introduction to Dynamics: Newton’s Laws of Motion
Centripetal Acceleration and Centripetal Force
Newton’s Universal Law of Gravitation
Linear Momentum and Force
Elastic and Inelastic Collisions in One Dimension
Impulse
Work, Energy and Power
Temperature and Heat
Electricity and Magnetism

Policies

Report a Complaint or Concern

UA-PTC takes very seriously complaints and concerns regarding the institution. Most complaints or concerns of a specific nature should be initiated and resolved at the campus level through normal college processes whenever possible. UA - Pulaski Technical College receives and resolves complaints using a variety of methods. To report a complaint or concern, please follow the link below.

https://www.uaptc.edu/report-a-concern-complaint

UA-PTC Attendance Policy

Education at UA-PTC requires students’ active involvement in the learning process. Thus, students are expected to attend all classes and actively engage in all learning assignments and/or opportunities provided in their classes. Class attendance should be treated as
mandatory by all students as attendance will be taken by all instructors during the first two
weeks of class. Additionally, a written policy on student attendance that is tied to course
objectives and included in a course syllabus will be provided for each course by instructors.

**Departmental Attendance Policy**

Attendance is strongly advised as material will not be covered multiple times. The same rule
applies to being on time.

**Course Policies**

The UA-PTC Catalog rules and regulations will be enforced in this course at all times.
Please consult the following website for more information: [https://www.uaptc.edu/catalog](https://www.uaptc.edu/catalog)

Professional behavior is required. Punctual attendance and intelligent participation are
expected. Particulars as determined by the instructor are detailed in the paragraph below.

Appropriate behavior is expected for all communications, including any notes, email messages,
or telephone conversations. Some guidelines for communication are included in this syllabus to
help you.

**Grading Policy**

Letter grades will be based on the following scale:

- 90 to 100%    A
- 80 to 89%     B
- 70 to 79%     C
- 60 to 69%     D
- 0 to 59%      F

Four concept tests and a final will be given during the semester. The test dates will be
determined on the first day of lecture. Tests cannot be made up. If a test is missed, the
percentage grade on the final will replace the percentage grade on one missed test. If a student
is present for all concept tests and decides to take the final, the final exam will replace his or her
lowest test grade, if the final exam is higher.

Laboratories count 20% of your grade. You will work in small groups under my supervision and
fill out data sheets as well as assigned questions on each. While group members will have the
same numerical data, each student is responsible for their own data sheet which is turned in at
the end of the lab. Incomplete data and answers will count off from the 10 points possible. When
in the lab, you agree to work only the assigned experiment(s), in the manner determined by the
instructor, and in the safest manner possible. There are no laboratory makeup sessions, and
absences will count as zero points for that lab. If you are late or leave early without prior
approval, you will not receive credit for the lab.
* Instructors have one week to provide feedback and post grades for all assignments unless otherwise noted by a departmental policy that has been approved by the Dean of the School.

**Academic Integrity**

It is expected that all students who attend UA-PTC conduct themselves in a manner appropriate for the college experience. Academic integrity is a vital component of collegiate behavior. The UA-PTC catalog states, “The gaining of knowledge and the practice of honesty go hand-in-hand.”

The catalog also states, “The responsibility and authority of initiating discipline arising from violations of the rules against dishonesty during the process of the course are vested in the instructor of that course.”

The complete Academic Integrity Policy is in the UA-PTC code of conduct.

**Accommodation Policy**

Services for Students with Disabilities: UA-PTC is committed to fulfilling all federal requirements as stated in the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and the American with Disabilities Amendments Act (ADAAA) of 2008. Accommodations are available to students who have documented disabilities. Students who request accommodations must register with the Disability Services Office (Main Campus: 501-812-2738 or South Campus: 501-812-2862) and must provide current and relevant documentation.

Students requesting accommodations should inform the instructor at the beginning of the course or as soon as accommodations are approved. It is the student’s responsibility to provide their Accommodation Letter to the instructor. Accommodations are not retroactive and will only be provided once your instructor receives the Accommodation Letter.

**Student Code of Conduct**

All students are expected to abide by the UA-PTC Student Code of Conduct. For the full Student Code of Conduct, access the most current version of the UA-PTC Academic Catalog. [http://uaptc.azurewebsites.net/docs/default-source/course-catalog/2017-18-academic-catalog.pdf?sfvrsn=a08a3038_2](http://uaptc.azurewebsites.net/docs/default-source/course-catalog/2017-18-academic-catalog.pdf?sfvrsn=a08a3038_2)

**Sexual Misconduct**

No person at UA-PTC will, on the basis of gender, be excluded from participation in, be denied benefits of, or be subjected to sex discrimination, sexual harassment or sexual misconduct under any education program or activity. All college administrative policies and procedures regarding sex discrimination, sexual harassment, and sexual misconduct are in compliance with Title IX. Students who feel they are victims of sexual misconduct should contact the UA-PTC Title IX Deputy Coordinator for Students:
Michelle Anderson, Director of Student Life and Leadership  
Campus Center Building Room 216  
501-812-2756  
manderson@uaptc.edu  

**Course Evaluations**

Students may be asked to evaluate their instructor and course near the end of the semester. These student evaluations are very important to the improvement in the quality of instruction and course materials. All results are anonymous and shared with the faculty only after the semester is over and grades have been posted.

**Information Literacy**

UA-PTC is committed to the Information Literacy Competency Standards for Higher Education as established by the Association of College and Research Libraries and endorsed by the National Forum on Information Literacy. Therefore, all courses will incorporate an information literacy component so that, by graduation, all students will be able to recognize the need for information, then locate, evaluate, synthesize, and communicate information in an ethical manner. Information literacy encompasses critical thinking, research, media, technology, health, business, and visual literacy skills to produce lifelong learners who can make informed decisions in the workplace and in their personal lives.

**Tentative Course Schedule**

Laboratory schedule and Lab name  
Week 2 Graph Analysis  
Week 3 Lab Measurements  
Week 5 ID of a Liquid  
Week 6 % Composition  
Week 7 Mole Calculations  
Week 8 Chemical Reactions  
Week 9 Analyzing Motion  
Week 10 Free fall, N's 2nd Law  
Week 11 F Vectors  
Week 12 Cons. Of momentum  
Week 13 Work, Energy, Power  
Week 14 Cons. Of Energy  
Week 15 Circuits

**Final Exam Schedule:** Tuesday Dec. 11 10:30 am -12:30 pm

Disclaimer: This schedule is a guide for the semester. The instructor reserves the right to amend the schedule as necessary.
Course Agreement Form

Read, complete, and return to instructor:

I have read the course syllabus for Josh Manley’s Physical Science class at Pulaski Technical College, and I understand its content. I also understand the rules for the class, and I will follow and abide by these rules, including those relating to attendance, assignments, grading criteria, plagiarism, and behavior.

__________________________
Semester

__________________________
Date

__________________________
Print name

__________________________
Signature

__________________________
UA-U-A-PTC Email address

__________________________
Telephone