ARKANSAS TECH UNIVERSITY

General Education Course Objectives and Learning Outcomes

Course Name: Survey of Chemistry Lab

Course Number: CHEM 1111

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Department: Physical Science

COMMON COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES THAT ARE OR WILL BE LISTED ON THE SYLLABUS OF EVERY SECTION OF THIS COURSE:	
Course objectives:	Survey of Chemistry Lab is an introduction to laboratory experiences in chemistry.
Student learning outcomes:	Upon successful completion of CHEM 1111: Survey of Chemistry, students will be able to: • Apply the safety rules and regulations to promote a safe laboratory environment for all students/personnel. • Perform and record measurements with appropriate equipment, correct precision, and proper units. • Use the scientific method to investigate scientific questions. • Identify chemical and physical properties of various chemicals. • Analyze data and draw conclusions, which are supported by the experimental data.
ADHE ACTS INFORMATION FOR THIS COURSE (IF APPROPRIATE)	
ACTS Course number:	CHEM 1214 (taken with CHEM 1113)
Copy the ACTS course objectives and learning outcomes:	General Description: Algebra-based chemistry course specifically designed for majors in health-related professions and is not appropriate for chemistry or other science majors or pre-professional students. Course content provides a foundation for work in health related areas. Course includes nomenclature, atomic and molecular structure, bonding, and reactions. Lab required. This is an algebra-based chemistry course and it is strongly recommended that the student should have completed Intermediate Algebra with a "C" or better. Expected Student Learning Outcomes: The student will explain, describe, discuss, recognize, and apply knowledge of the following: • Measurements and unit conversions • Structure and composition of the atom • Periodic table • Ionic and covalent bonding • Inorganic nomenclature • Chemical reactions • Basic Stoichiometry • Gas laws • Solutions

	• Energy of reactions • Acid/base reactions and equilibria • Identifying Oxidation-Reduction Reactions • Nuclear Chemistry

WHICH ATU GENERAL EDUCATION GOALS DOES THIS COURSE FULFILL? (NO MORE THAN TWO)

Communicate effectively

Written communication

Oral communication

Think critically

Develop ethical perspectives

Diversity

Empathy

Leadership

X Apply scientific and quantitative reasoning

X Scientific reasoning

Quantitative reasoning

Apply the value of the arts and humanities

Practice civic engagement

DESCRIPTION OF HOW THIS COURSE MEETS THE GENERAL EDUCATION GOALS CHOSEN ABOVE (TO BE INCLUDED ON THE SYLLABUS OF EVERY SECTION OF THIS COURSE)

- Use the scientific method to investigate scientific questions. (Aligns with the General Education Goal: Apply Scientific and Quantitative Reasoning.)