

CHM 131A Introduction to Chemistry Lab

COURSE DESCRIPTION:

Prerequisites: DMA 010, DMA 020, DMA 030, or MAT 003, and DRE 097, or ENG 002.

Corequisites: CHM 131

Course description. This course is a laboratory to accompany CHM 131. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 131. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 131

This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a general education course in Natural Science. This course has been approved for the transfer under the ICAA as a general education course in Natural Science.

Course Hours per Week: Class, 0 hours. Laboratory, 3 hours. Semester Hours Credit, 1.

LEARNING OUTCOMES:

Upon completing requirements for this course, the student will be able to:

1. Students will demonstrate competency in performing hands-on laboratory tasks.
2. Students will demonstrate knowledge of laboratory safety and proper handling of chemicals.

OUTLINE OF INSTRUCTION:

- I. Laboratory conduct and safety
- II. Measurement
- III. Conversions, and Problem solving
- IV. Density and Specific Gravity
- V. Temperature and Specific Heat
- VI. Atoms and Elements
- VII. Electron Configuration and Periodic Properties
- VIII. Compounds and their bonds
- IX. Chemical Reactions and Equations
- X. Moles and Chemical Formulas
- XI. Gas Laws
- XII. Partial Pressures
- XIII. Solutions, electrolytes, and Concentration
- XIV. Reaction Rates and Chemical Equilibrium
- XV. Acids, Bases, pH, and Buffers
- XVI. Acid-Base Titration

REQUIRED TEXTBOOK AND MATERIAL:

The textbook and other instructional material will be determined by the instructor.