WINSTON-DILLARD SCHOOL DISTRICT #116
PLANNED COURSE STATEMENT

School Name: Douglas High School

Grade Level(s): 7 ☐ 8☐ 9☐ 10☐ 11☒ 12☒

Department: Science

Status: Required ☒ Elective ☐

Course Title: Chemistry 104

Credit: 0.5 ☐ 1.0 ☒ 1.5 ☐ N/A ☐

Length of Course: Semester ☐ Full Year ☒

College/Dual Credit: Yes ☒ No ☐

Prerequisite(s): Algebra I

Revision Date: Click here to enter a date.

Textbook(s): Experience Chemistry, Savaas and Chemistry: Atoms First from OpenStax (free online)

CTE Course: Yes ☐ No ☒

Course Overview:

CH104 is a dual credit general chemistry course, which students would earn 4 college credits during the course of the full school year. It is required for some bachelor's degrees granted at other institutions (i.e. Dental Hygiene at O.I.T.) Some AAS degree programs require only CH 104 — see specific programs for details. This is a prerequisite for Anatomy and Physiology. Required when applying for the nursing program, dental hygiene, physical therapy, phlebotomy, and other allied health careers.

General Course Content:

This course focuses on lab skills, measurement and dimensional analysis, properties of matter, elements and compounds, nomenclature, periodic table and trends, chemical equations, stoichiometry, and atomic structure.

Learning outcomes:

Demonstrate a basic knowledge of core content. This content will include the theory, principles, and applications of atomic structure, periodic law, stoichiometry, nomenclature, states and classification of matter, mole relationships, and an introduction to chemical bonding.

Discuss the basic descriptive chemistry of the main group elements.

Identify and discuss instances of chemical laws at work in everday life.

Use IUPAC nomenclature for both inorganic and organic compounds.

Formulate an approach and solve problems involving stoichiometry.

Perform basic laboratory techniques including accurate measurement or mass and volume, safely using Bunsen burners, and using a variety of lab specific techniques and items.

Specify limitations and assumptions made in scientific hypotheses and theories.

Common Core Standards Addressed:

Next generation science standards addressed:

Review MS-PS1-1 through 5

HS-PS1-1, HS-PS1-2, HS-PS1-3, HS-PS1-4, HS-PS1-5, HS-PS1-6, HS-PS1-7, HS-PS2-6, HS-PS3-1 and beyond

Assessment Strategies:

Quizzes intermittent through units, Unit exams, semester exams, and a Spring Final for UCC credit.

Strategies for Differentiated Instruction (TAG, SPED, etc.):

Challenge and real world application problems for TAG students.

Extra supports are available for struggling students, similar to what would be available in any high school class, but the accelerated and advanced learning has to be kept for UCC dual credit to be earned.

Specific Learning Activities:

Units of study include lectures, videos, guided notes with problem solving examples, practice assignments, modeling activities, group practice, and laboratory experience to enhance the understanding of content as well as provide experience with proper lab techniques.