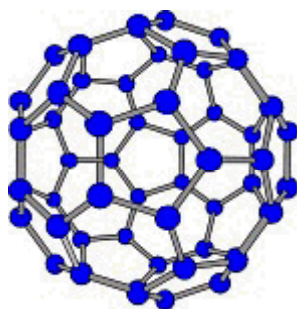


A more inclusive syllabus will be posted on blackboard.

Chemistry 109



Carnetta Skipworth
Assistant Professor of Chemistry

Let's Have a Ball with Chemistry!

CHEMISTRY 109C

Instructor: Mrs. Carnetta Jenkins Skipworth
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Office Hours: Available on office door

Course Description:

Chm 109C is a course designed to emphasize the practical aspects on inorganic, organic and biochemistry as related to human health. The course is offered specifically for students in the allied health programs, but is also recommended for students in physical education, recreation, health and safety and other disciplines dealing with human health. It does not count toward a major or minor in chemistry, but does satisfy a general education requirement under category D. No laboratory accompanies this course.

University General Education Goal:

The course fulfills the E-NS Colonnade requirement and the D.1. (Science) former general education requirement. It will help you attain an understanding of the scientific method and will give you knowledge of a natural science and its relevance in our lives.

Through coursework, literature research, and other class activities Chemistry 109C helps to improve the quality of life of citizens by elucidating the steps of the scientific method and giving the opportunity to realize the significance of chemistry in the medical field and in our lives.

Texts:

Listed on WKU's bookstore website

Do not login to Learn Smart or Connect via the company's website. You will be logging in via Blackboard. It is less expensive to purchase the book through the publisher's website. Details will be sent closer to the beginning of class.

Materials Needed:

Calculator with scientific notation function (no graphing calculators)

Exams:

Students will take exams at an approved Testing Center. WKU offers a free Testing Center to WKU students (www.wku.edu/testing).

Student Learning Objectives:

- Students will gain problem solving skills to use throughout this course, other courses, and life.
- Students will gain strong analytical, communication, quantitative, and information skills.
- Students will be able to understand the scientific method.
- Students will be able to understand the concept of matter and the properties of matter.
- Students will be able to understand concept of an atom.
- Students will be able to understand the periodic table.
- Students will be able to understand the concept of a chemical reaction and will be able to understand the difference between reactants and products.
- Students will have a better understanding of the three phases of matter (solid, liquid, and gas).
- Students will be able to understand the difference between an acid and a base.

- Students will be introduced to several types of chemistry (nuclear, organic, polymer, biochemistry, etc.).
- Students will obtain a basic understanding of organic and biochemistry
- Students will be able to complete mathematical problems dealing with various areas in chemistry.
- Students will be able to realize the significance of chemistry in our society and in the health field.
- Students will be able to think critically and will be able to transfer skills and knowledge from one setting to another.
- Students will gain a deep understanding of and hands-on experience with the inquiry practices of chemistry and the health field that explore the natural, social, and cultural realms.

Topics Covered:

- Matter and Energy
- Scientific Notation, Significant Figures, Metric System
- Percentage Weight/Volume, Percentage Volume/Volume, Dimensional Analysis
- Temperature and Density
- Atomic Structure
- Electronic Structures of Atoms and Ions
- Ionic Bonding, Polyatomic Ions, Names and Formulas of Ionic Compounds, and Formula Weight
- Covalent Compounds, Dot Structures
- Covalent Bonds, Nonpolar and Polar Bonds, Names and Formulas of Covalent Compounds,
- Mole-Gram Conversions and Balancing Chemical Equations
- Characteristics of Gases, Boyle's and Charles' Law
- Characteristics of Solutions, Electrolytes, Equilibrium, and Dialysis
- Acids, Bases, pH, and Blood Buffers
- Introduction to Organic Chemistry and Biochemistry