

I. COURSE INFORMATION

- A. Chemistry 105 Introduction to Chemistry
- B. 5 credit hours
- C. Zumdahl, Steven S. and Donald J. DeCoste. *Introductory Chemistry: A Foundation*. 9th ed. Kentucky: Cengage, 2019
- D. Prerequisites: Student must be eligible for COL101, English Composition I and MAT103, Intermediate Algebra or higher
- E. KRSN: CHM 1030 General Chemistry for Non-Majors with Lab

The learning outcomes and competencies detailed in this course outline or syllabus meet or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Groups project for this course as approved by the Kansas Board of Regents.

II. COURSE DESCRIPTION

Introduction to Chemistry is an integrated lecture and laboratory course designed for non-chemistry majors seeking basic chemistry concepts. This course includes the science of the composition and structure of matter, including the study of the changes that matter undergoes. Also, study of fundamental principles and theories of chemistry and an introduction to organic chemistry and biochemistry will be an integral component to this course.

III. LEARNING OUTCOMES

- A. Explain the chemical context of topics as they relate to the natural sciences and society
- B. Demonstrate knowledge of atoms, the periodic table, molecular structure, and bonding
- C. Recognize differences between phases of matter
- D. Identify and analyze different types of chemical reactions, including energetics and stoichiometry
- E. Solve problems involving solutions, gases, and acids and bases
- F. Record quantitative and qualitative data accurately. Critically analyze data and chemical information from various sources responsibly and accurately
- G. Apply knowledge and good laboratory practices

IV. MAJOR CONTENT AREAS

- A. Matter, the Metric System, and Measurements and Calculations
- B. The Atom and the Periodic Table
- C. Compounds: Bonding, Structure, and Nomenclature
- D. Chemical Reactions, Mole Calculations, and Stoichiometry
- E. Physical states of matter
- F. Organic and Biochemistry

V. ASSIGNMENTS (may include but are not limited to)

- A. Assignments
- B. Laboratory exercises
- C. Quizzes and exams
- D. Final examination

VI. EVALUATION METHODS (may include but are not limited to)

- A. Attendance and participation
- B. Lab exercises
- C. Assignments
- D. Quizzes and exams
- E. Final exam