

General Education Course Objectives and Learning Outcomes

Course

Name: Survey of Chemistry

Course Number: CHEM 1113

Department: Physical
Science

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COMMON COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES THAT ARE OR WILL BE LISTED ON THE SYLLABUS OF EVERY SECTION OF THIS COURSE:

<i>Course objectives:</i>	Survey of Chemistry is a brief introduction to fundamental concepts in chemistry.
<i>Student learning outcomes:</i>	<p>Upon successful completion of CHEM 1113: Survey of Chemistry, students will be able to:</p> <ul style="list-style-type: none"> • Discuss the impact of chemistry on society and the environment. • Perform basic calculations, using the appropriate units, to characterize chemical systems. • Identify the composition, structure, and properties of matter at a fundamental level. • Use chemical equations to describe the characteristics of chemical reactions.

ADHE ACTS INFORMATION FOR THIS COURSE (IF APPROPRIATE)

<i>ACTS Course number:</i>	CHEM 1214 (taken with CHEM 1111)
<i>Copy the ACTS course objectives and learning outcomes:</i>	<p>General Description:</p> <p>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.</p> <p>Expected Student Learning Outcomes:</p> <p>The student will explain, describe, discuss, recognize, and apply knowledge of the following:</p> <ul style="list-style-type: none"> • 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

X Think critically

Develop ethical perspectives
 Diversity
 Empathy
 Leadership

X Apply scientific and quantitative reasoning

Scientific reasoning

X 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)

- Discuss the impact of chemistry on society and the environment. (Aligns with the General Education Goal: Think Critically.)
- Perform basic calculations, using the appropriate units, to characterize chemical systems. (Aligns with the General Education Goal: Apply Scientific and Quantitative Reasoning.)