Chemistry with Lab – C833

Overview

Chemistry with Lab for graduates provides already licensed teachers seeking an additional license or endorsement in middle school science, physics, biology, or the geosciences with an introduction to the field of chemistry, the branch of science that studies the composition, structure, properties, and behavior of matter. Designed for those not majoring in chemistry education, this course highlights how the topics covered can be applied within various branches of science. This course provides students with opportunities to examine the electronic structure of atoms, study periodic trends, name chemical compounds, write chemical formulas, determine the structure of molecules, balance chemical reactions, and discover the changing states of matter. Laboratory experiences facilitate the study of matter and the application of laboratory safety and maintenance procedures. Concepts in Science for graduates is a prerequisite for this course.

Competencies

- **The Central Role of Chemistry**
  The graduate evaluates how chemistry relates to other sciences to understand its relevance within the physical and natural world.

- **Laboratory Safety and Procedures**
  The graduate conducts safe and effective investigations to test hypotheses and draw conclusions.

- **Electronic Structure and Periodic Properties**
  The graduate analyzes the electronic structure of atoms and periodic trends to distinguish properties of various substances.

- **Chemical Naming**
  The graduate explains how to use the periodic table and IUPAC rules to name chemical compounds.

- **Molecular Structure and Bonding**
  The graduate explains how chemical bonds and electron orientation impact the structures and behavior of molecules to understand the composition of matter.
Thermochemistry
The graduate analyzes the relationship between heat and other forms of energy to examine the behavior of heat under various circumstances.

States of Matter
The graduate examines the physical states of matter to explain their properties and the process by which matter changes state.

Learning

Getting Started
Welcome to Chemistry! You should begin by locating your Chemistry LabPaq materials, which you ordered upon enrolling in Concepts in Science. After locating your LabPaq materials, view the “Get Started” section of the course, which demonstrates how to use the competency diagnostic tool at the beginning of each unit to identify areas in which you are not yet competent so you can plan your study time accordingly. Each course unit aligns to a single course competency and includes readings, videos, knowledge checks, discussions, labs, and simulations that will help you build and apply your chemistry knowledge and skills. At the end of each unit, complete the competency check to gauge your progress after completing the recommended lessons. If you find that your performance on the competency check has not improved as a result of completing the recommended lessons, reach out to a course mentor for support. Competency will be demonstrated by the successful completion of both an objective and performance assessment. *(Note: You can view this course in any browser except Internet Explorer 11.)*

Assessments

Pre-Assessment: Chemistry with Lab

- STATUS: Not Attempted
- # OF ITEMS: 55
- TIME ALLOTTED: 150 minutes
- CODE: PAP2

TAKE NOW
Objective Assessment: Chemistry with Lab

Status: Not Attempted

Time Allotted: 150 minutes

Code: WYC2

Performance Assessment: Application of Chemistry with Lab

Status: Not Attempted

Code: WYT2

A score of Competent or Exemplary is required to pass all assessments. Passing a preassessment does not guarantee you will pass the high stakes assessment.

On objective assessments, you will be charged a retake fee for the third attempt and every attempt thereafter. For more information click here.

Course Instructor

Course Instructor Group

chemistry@wgu.edu

Announcements

Course Tips