



NORTHWEST FLORIDA STATE COLLEGE

Course Syllabus

Course Name: General Chemistry I

Course Number: CHM1045C

Section: 20113

Credit Hours: 4

Instructor Name: Dr. Lisa Struck

Instructor Office Location: 350/218 Niceville Campus

Instructor Email: struckl@nwfsc.edu

Course Curriculum

This course is designed for students pursuing careers in the sciences or who need a more rigorous presentation of chemical concepts than is offered in an introductory course. Students will engage in problem solving and critical thinking while applying chemical concepts. Topics will include the principles of chemistry including atomic theory, electronic and molecular structure, measurement, stoichiometry, bonding, periodicity, thermochemistry, nomenclature, solutions, and the properties of gases.

Goals

The student will demonstrate an understanding of the scientific method, distinguishing between fact, scientific law, hypotheses, and theory; and recognizing the difference between scientific and non-scientific explanations.

The student will interpret data, given in problem form or obtained experimentally, in order to demonstrate problem-solving skills (critical thinking), develop testable explanations, or distinguish the difference between correlation and causation.

The student will demonstrate fundamental knowledge of the terminology, major concepts, and theories of at least one field within the physical sciences, and in the biological sciences.

The student will relate scientific discoveries and theories to broader areas of human concern.

Objectives

Student Learning Outcomes:

- *Students will apply the law of conservation of matter and energy.*
- *Students will implement rules of significant numbers to all measurements.*
- *Students will explain the fundamental properties of matter including but not limited to atomic and electronic structure, and periodicity.*
- *Students will apply IUPAC rules of nomenclature.*
- *Students will predict molecular geometry and properties from bonding theories*
- *Students will predict and explain the products of chemical reactions (e.g., acid-base, oxidation-reduction, precipitation, dissociation).*

Student Expectations of the Course

Instructor will reply to emails with 48 College business hours
Instructor will post and maintain office hours
Instructor will provide a schedule of material to be covered on the syllabus
Instructor will communicate important information such as exam dates in a timely manner
Instructor will maintain updated gradebook in the Canvas LMS
Instructor will include a clear grading policy in the syllabus
Instructor will include contact information such as their email address and phone number
Instructor will return graded work in a timely manner
Instructor will post videos in the Canvas LMS on topics covered for students to watch at their leisure

How Student Performance will be Measured

The student may be evaluated by the following methods:

Periodic exams over lecture material

Periodic quizzes

Completion of laboratory experiments and lab reports

Completion of written homework assignments and/or online homework assignments in the Canvas LMS