

Chemistry SLO

Chem 10

1. Develop problem solving techniques by applying the "Scientific Method" to chemical data.
2. Evaluate the relationship between molecular structure and chemical properties of compounds.

Chem 50

1. Assess the fundamental concepts of modern atomic and molecular theory.
2. Evaluate the standard classes of chemical reactions.
3. Demonstrate a fundamental understanding of mathematical concepts pertaining to chemical experimentation and calculations.

Chem 1A

1. Identify and explain trends in the periodic table.
2. Construct balanced reaction equations and illustrate principles of stoichiometry.
3. Apply the first law of thermodynamics to chemical reactions.

Chem 1B

1. Demonstrate a knowledge of intermolecular forces.
2. Evaluate the principles of molecular kinetics.
3. Apply principles of chemical equilibrium to chemical reactions.
4. Apply the second and third laws of thermodynamics to chemical reactions.

Chem 1C

1. Apply the principles of equilibrium and thermodynamics to electrochemical systems.
2. Apply the principles of transition metal chemistry to predict outcomes of chemical reactions and physical properties.
3. Evaluate isotopic decay pathways.

Chem 12A

1. Predict the product of a chemical reaction.
2. Apply principles of thermodynamics, kinetics, and equilibrium to organic reaction systems.
3. Generate logical stepwise reaction mechanisms.
4. Construct molecular structure from spectroscopic data.

Chem 12B

1. Apply molecular orbital theory to predict the outcome of selected chemical reactions.
2. Apply resonance theory to predict the major and minor products of chemical reactions.
3. Generate logical multi-step syntheses of increasingly complex molecules.
4. Construct logical stepwise reaction mechanisms for increasingly complex chemical systems.

Chem 12C

1. Apply the principles of thermodynamics, kinetics, equilibrium to biologically important molecules.
2. Conduct spectroscopic analysis and identify structures of biologically important molecules.
3. Generate stepwise reaction mechanisms of biologically important molecules.
4. Design logical syntheses and structural modifications of biologically important molecules

Chem 30A

1. Solve stoichiometric problems by applying appropriate molar relationships.
2. Predict the behavior of ideal gasses using Kinetic Molecular Theory.
3. Apply acid-base chemical principles to biological processes.

Chem 30B

1. Differentiate the general reactions of the principle organic functional groups.
2. Evaluate the major classes of biological compounds from a chemical perspective.

Example of Assessment Page

Phase II: Assessment Planning for Learning Outcome 1 for CHEM 30A

Please complete the following with regards to conducting the assessment on this outcome:

When will the assessment be conducted? Quarter: Year:

Who will be conducting the assessment?:

[Add Assessor not listed (from ECMS account holders)] New assessor(s) selected. [Show]

Ram Subramaniam
Cinzia Muzzi
David Gray
Ram Subramaniam

Other Assessor:

Which sections of this course will be assessed by this team? (optional, example: 06Y):

CHEM 30A- , CHEM 30A- , CHEM 30A- , CHEM 30A-

If there are more than four sections to be assessed, please add them in the "Additional Notes" sections from the Main Menu/Team Members section.

What assessment tools do you plan to use? Please check all that apply:

----- Add tools: -----

Exams
Portfolios
Logs
Performances/Demonstrations
Interviews
Papers/Essays
Written Reports
Performances (Simulated)
Art Works or Products

Other Tool::