

Unit 3: Energy Changes and Rates of Reaction

Students will demonstrate an understanding of how energy changes and rates of reaction can be described quantitatively. They will investigate ways to improve the efficiency of chemical reactions by applying optimal conditions. Students will also evaluate the societal and environmental costs and benefits of technologies that transform energy.

Unit 4: Chemical Systems and Equilibrium

Students will demonstrate an understanding of the predictable ways in which chemical systems are dynamic and respond to changing conditions. They will also assess the significant implications for nature and industry of applying chemical systems at equilibrium.

Unit 5: Electrochemistry

Students will demonstrate an understanding of the predictable way in which electrons are transferred from one substance to another in oxidation and reduction reactions. They will also assess the significant implications of controlling and applying oxidation and reduction reactions for industry, health and safety, and the environment.

Teaching Strategies:

A variety of teaching and learning strategies will be incorporated throughout the course.

Assessment & Evaluation:

Assessment and evaluation will encompass all four categories of achievement:

Knowledge and Understanding; Thinking/Inquiry; Communication; and Making Connections/Application.

This course will involve a number of assessment and evaluation strategies that will provide all students an opportunity to meet with success.

The Final Grade:

The evaluation for this course is based on the student's achievement of curriculum expectations and the demonstrated skills required for effective learning. The final percentage grade represents the quality of the student's overall achievement of the expectations for the course and reflects the corresponding level of achievement as described in the achievement chart for the discipline. A credit is granted and recorded for this course if the student's grade is 50% or higher. The final grade will be determined as follows:

- 70% of the grade will be based upon evaluations conducted throughout the course. This portion of the grade will reflect the student's most consistent level of achievement throughout the course, although special consideration will be given to more recent evidence of achievement.
- 30% of the grade will be based on final evaluations administered at the end of the course. The final assessment may be a final exam, a final project, or a combination of both an exam and a project.

Learning Skills and Work Habits:

The following Learning Skills and Work Habits are evaluated regularly using a scale of Excellent, Good, Satisfactory or Needs Improvement: **Responsibility, Organization, Independent Work, Collaboration, Initiative, Self-Regulation.**