CH 107 : PHYSICAL SCIENCE: CHEMISTRY

Transcript title
Physical Science: Chemistry

Credits
4

Grading mode
Standard letter grades

Total contact hours
60

Lecture hours
30

Lab hours
30

Recommended preparation
one year of high school algebra or equivalent or concurrent enrollment in MTH 060.

Course Description
Provides an introduction to properties and structures of matter, chemical bonding, solutions, and chemical changes. Intended to provide the non-science major an introduction to the fundamental ideas, importance and impacts of chemistry in society.

Course learning outcomes
1. Use the fundamental symbolic language of chemistry.
2. Describe the fundamental composition and structure of matter and predict its corresponding behavior.
3. Explain the nature and types of energy and predict its interaction with matter.
4. Use measurement and mathematics to understand and solve chemical problems.
5. Demonstrate the process of scientific inquiry and use data collection, analysis and collaborative skills in laboratory investigations.
6. Apply chemical concepts to new situations in our lives.
7. Demonstrate critical thinking and analytical skills.
8. Sustainability Outcome: Analyze the major environmental, social, and economic challenges and potential solutions of our time using a systems thinking approach.

Content outline
1. Scientific Method/Nature of Science
2. Data: qualitative and quantitative, scientific reasoning from data
3. Measurement and data analysis
4. The Nature of Matter
5. Conservation of mass and energy
6. Structure of atoms
7. Chemical structure and bonding
8. Chemical reactions
9. Chemistry applied (to environment, consumer issues, etc.)
10. Chemistry and Sustainability

Required materials
None required.

General education/Related instruction lists
- Science Lab