

CHEMISTRY

2007-2008

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COURSE DESCRIPTION

This Chemistry course will be the study of the composition and change of matter. Chemistry is a descriptive and quantitative science based on controlled experiments, logic and theory. Emphasis is placed on measurement, problem solving, and the processes of physical and chemical change. Models are used to explain observable phenomena and are verified by experimentation and observation. Scientific laws, theories, principles, and concepts are taught from a perspective that promotes an appreciation for the wisdom and creative power of God.

COURSE GOALS

This Chemistry course will help the student to achieve the following:

1. Discern the wisdom and power of God, who has designed the laws that govern the phenomena that we observe in chemistry.
2. Understand the basic laws and theories that apply to chemistry.
3. Use conceptual models in the study of chemistry.
4. Understand the structure and/or characteristics of matter and energy.
5. Observe phenomena and record data; then organize interpret, and draw valid conclusions based on that data.
6. Safely use laboratory equipment and internalize an ethical approach to the use and disposal of chemicals.
7. Use reference materials to secure information necessary to understand a particular aspect of chemistry.
8. Recognize the importance of continued scientific research to help solve chemistry-related problem in society.
9. Recognize career and vocational opportunities in chemistry-related fields.

COURSE TEXTBOOKS

Chemistry, Prentice Hall

COURSE EVALUATIONS

- There will be a test after each chapter
- There will be a cumulative final in January and one in June. (The one in June will cover from the final in January to June.)
- Homework
- Classwork (bell work, participation, assignments)
- 2 Projects
- Quizzes
- Laboratories

COURSE TOPIC OUTLINE

The following is a general outline of topics to be covered in this class (subject to change if necessary):

Chapters	Topic
1	Introduction to Chemistry
2	Matter and Change
3	Scientific Measurement
4	Atomic Structure
5	Electrons in Action
6	The Periodic Table
7	Ionic and Metallic Bonding
8	Covalent Bonding
9	Chemical Names and Formulas
10	Chemical Quantities
11	Chemical Reactions
12	Stoichiometry
13	States of Matter
14	The Behavior of Gases
15	Water and Aqueous Systems
16	Solutions
17	Thermochemistry
18	Reaction Rates and Equilibrium
19	Acids, Bases, and Salts
20	Oxidation-Reduction Reactions
21	Electrochemistry
22	Hydrocarbon Compound
23	Functional Groups
24	The Chemistry of Life
25	Nuclear Chemistry

COURSE ASSIGNMENT DUE DATES

After each chapter there will be a 50 minutes test, which will not be accumulative. Only finals are accumulative. The test will be made up of matching, multiple choice, fill-in-the-blank, and essay.

There will be a quiz daily except on the day of a test and the day after the test.

Homework will be due the day after assigned at the beginning of class. Late assignments will only be accepted one day after the day due at half the points.

There will be a project that the learner will present to the class. There will be a more detailed description for the learner to follow about mid-semester.

Class assignments will be due at the class time allotted.

There will be a lab on Fridays.

COURSE GRADING SYSTEM

The grades will be earned on a point system. The letter grade will be given in accordance to the points the learner earned, points are approximated:

Chapter test: 100 points (x 25)
Classwork: 25 points per day (x 135)
Quizzes: 10 points (x 135)
Projects: 200 points (x 2)
Finals: 250 points (x 2)
Laboratories 370 points
Total points 8395 (possible)

A = 8395 to 8045

A- = 8044 to 7694

B+ = 7693 to 7343

B = 7342 to 6992

B- = 6991 to 6641

C+ = 6640 to 6290

C = 6289 to 5939

C- = 5938 to 5588

D+ = 5587 to 5237

D = 5236 to 4886

D- = 4885 to 4535

F+ = 4534 to 4184

F = 4183 or less