HOMEWORK ASSIGNMENTS

GENERAL CHEMISTRY I

Spring 2009

The following sections of the Chemskill Builder must be completed in order to get credit for homework. You may do them as many times as you like; only your highest score for each section are counted. A score of 80 or better will be counted as full credit. Remember that all these assignments are worth a maximum of 100 points. There are many practice problems in your text at the end of the chapters with answers to the even-numbered problems at that end of the book. You are welcome and encouraged to do as many of these as you have time for, but there is no credit for these. CREDIT WILL BE GIVEN ONLY FOR THE CHEMSKILL BUILDER ONLINE. Chemskill Builder is available at the bookstore in a format for online use at http://www.chemskillbuilder.com

1.2 Chemical Reactions/ Physical Processes
1.3 Three Phases of Matter
1.4 Names/Symbols of Elements I
1.5 Chemical Compounds
1.6 Temperature conversion

2.1 Significant Notation
2.2 Scientific Figures
2.3 Measurement and Interpolation
2.4 Metric Prefixes
2.5 Dimensional Analysis/Unit Conversions
2.6 Density and Volume Problems

8.1 Heat Capacity Problems

3.1 Names/Symbols of Elements II
3.2 Molecules and Ions
3.3 Cations and Anions
3.4 Acids, Bases and Salts
3.5 Elements, Compounds and Mixtures

5.2 Products of Metathesis Reactions
5.3 Ionic and Net Ionic Equations
5.4 Balancing Equations

4.1 The Mole Concept
4.2 Mole/Mass calculations
4.4 Limiting Reactants and Yield
4.5 Percent Composition
4.6 Empirical Formulas

It is recommended that these be completed by Thursday Feb.26,2009
6.1 Molar Concentration
6.2 Titration’s
6.3 Volumetric Analysis
6.4 Molarity of Ions

7.2 Gas Law Problems
7.3 Ideal Gas Law
7.4 Gas Mixtures and Partial Pressures
7.5 Kinetic-Molecular Theory

8.5 Endothermic and Exothermic Processes
8.6 Enthalpy Change Problems

9.1 Elementary particles and Isotopes
9.3 Orbital Box Model of Electrons
9.4 Electron Configuration I
9.6 Quantum Numbers

11.1 Size of Atoms and Ions
11.2 Ionization Energy and Electron Affinity
11.3 Valence Electrons and Charge of Ions

It is recommended that these be completed by Thursday April 2, 2009

12.1 Electronegativity and Bond Polarity
12.2 Lewis Dot Diagrams
12.3 Shapes of Ions and Molecules
12.4 Resonance and Formal Charges
12.5 Review of Molecular Shapes

13.1 Orbital Shapes in Molecules
13.2 Orbital Hybridization
13.4 Polarity of Molecules

14.1 Change of Physical State
14.2 Types of Bonding in Solids
14.4 Intermolecular Forces in Liquids
14.6 Phase Diagrams

15.1 Solvents and Solutions
15.2 Concentration Calculations
15.3 Pressure and Temperature Effects
15.5 Freezing Point Lowering and Boiling Point Elevation

All Sections must be done by Thursday April 30, 2009