Chemistry 101
Unit 9 – Outcomes

The student will be able to:

1) Identify characteristic properties of a solution.

2) Identify and/or define terms relating to solutions.

3) Distinguish among terms in the following groups:
Solute and solvent
Concentrated and dilute
Solubility, saturated, unsaturated, and
Miscible and immiscible

4) Describe the formation of a solution or the dissolving process in terms of separation of ions, hydration, homogeneity and reversibility.

5) Define solution concentration using a "per expression."

6) Identify the following concentration ratios:
a) Percentage concentration by mass
b) Molarity

7) Given grams of solute and grams of solvent, (or grams of solution), calculate %, (by mass), concentration.

8) Given desired %, (by mass), concentration calculate the grams of solvent and/or grams of solvent needed to prepare a given volume of solution.

9) Given two of the following, calculate the third:
Moles of solute (or data from which it may be found)
Volume of solution
Molarity

10) Given the quantity of any species participating in a chemical reaction for which the equation can be written, find the quantity of any other species, either quantity being measured in:
a) grams
b) volume of gas at STP
c) volume of solution of specified molarity

11) Define the terms relating to titration:
a) Titration
b) Standard Solution
c) Endpoint
d) Indicator
e) Neutralization