Chemistry 101
Unit 5 – Outcomes

The student will be able to:

1) Given the name or the formula of an element shown in the table listed on the next page, write the other.

2) Identify those elements that exist as diatomic molecules.

3) Given the formula for a chemical compound classify it as ionic or molecular.

4) Given the name or formula of a binary molecular compound, write the other.

5) Given the name or the formula of water and ammonia, write the other.

6) Define the following terms:
   ion cation
   monatomic ion anion

7) Given a Periodic Table and the name or formula of a monatomic ion, write the other.

8) Use a Periodic Table to predict how many electrons will be lost by a metal atom to form a monatomic ion.

9) Use a Periodic Table to predict how many electrons will be gained by a non-metal atom to form a monatomic ion.

10) Given the formula for a monatomic ion, determine its oxidation state or oxidation number.

11) Given the name or a formula (including the charge) of a polyatomic ion, write the other.

12) Given the formula of a compound, determine if it will act as an acid.

13) Given the formula or the name for a binary acid, write the other.

14) Given the name of a polyatomic ion, name the corresponding oxoacid.

15) Given the name or formula of an ionic compound, write the other.

16) Given the formula of a chemical compound, or a name from which the formula may be written, determine the number of atoms of each element in the formula.

17) Distinguish among atomic mass, molecular mass and formula mass.

18) Calculate the formula (molecular) mass of any compound whose formula is known or given.

19) Define the mole. Identify the number that corresponds to one mole.

20) Given the number of moles or number of formula units in any sample, calculate the other.

21) Define molar mass, or interpret statements in which the term molar mass is used.

22) Calculate the molar mass of any substance whose chemical formula is known.