**CHEM131 TBL**

**Unit 3 – Chemical Bonding**

**Must Know List**

1. Write Lewis dot representations of atoms.

2. Predict whether bonding between specified elements will be primarily ionic, covalent or polar covalent.

3. Compare and contrast characteristics of ionic and covalent compounds.

4. Describe how the properties of compounds depend on their bonding.

5. Describe how the elements bond by electron transfer (ionic bonding).

6. Describe energy relationships in ionic compounds.

7. Predict the formulas of ionic compounds.

8. Describe how elements bond by sharing electrons (covalent bonding).

9. Write Lewis dot and dash formulas for molecules and polyatomic ions.

10. Recognize exceptions to the octet rule.

11. Write formal charges for atoms in covalent structures.

12. Describe resonance, and know when to write resonance structures and how to do so.

13. Relate the nature of bonding to electronegativity differences.