

## Chem 101 Lectures 1-2 summary

The following is a summary of topics discussed in the first week of the course (chapter 1) material:

- 1) Explanation of the syllabus
- 2) discussion of significant figures and how they are determined for addition & subtraction; multiplication and division.
- 3) metric units for basic measurements. The prefixes (kilo, milli, etc) and what they mean.
- 4) conversion from one unit to the other. the use of conversion factors. examples using: % composition and also density.
- 5) Importance of chemistry in everyday life. Example of aspirin in medicine. Ways of describing the aspirin molecule using structural formulas etc.
- 6) the scientific method and how it has revolutionized knowledge acquisition.
- 7) Matter and its properties: intensive and extensive.
- 8) physical states of matter (and kinetic molecular theory) ; Physical change
- 9) temperature conversion
- 10) density.
- 11) chemical changes: example of sugar heating.
- 12) Energy
- 13) substances: pure (elements and compounds) vs mixtures (homogeneous and heterogeneous)
- 14) Dalton's atomic theory
- 15) Types of elements: metals, nonmetals, metalloids.
- 16) Ways of representing compounds. Allotropes.