CHEMISTRY 116 - Fall 2021
Dr. Audrey Dell Hammerich
2 - Week of August 29
Stoichiometry I

NOTE: Brief quiz on Friday in quiz section given in OWL (emphasis on material from last week and Monday). **BRING YOUR LAPTOP TO FRIDAY DISCUSSION.**

NOTE: Your first lab report is due this week. Lab reports are due in lab one week after the experiment is performed following the directions given in the Lab Reports file under the Laboratory tab on Blackboard. Note that even though you have submitted a prelab before doing the experiment and turned in the original notebook pages of the data you collected on the day it was collected, your lab report will also have the prelab in it and a copy of the data.

NOTE: Beginning with H_Exp 2 all of the Harris (H) experiments will have a cover sheet which is a fillable pdf form. You will need to have the ability to type on the form. Download the free Adobe Acrobat Reader DC from the link provided under the Laboratory tab on Blackboard.

LAB ASSIGNMENT: Submit prelab before lab session starts; *Online* H_Exp 2: Gravimetric Determination of Calcium as $CaC_2O_4 \cdot H_2O$ (H: Ch 1-4, 2-7– 2-8, 27-1–27-3). Your TA will send you the data for this lab. Note that this lab has a coversheet (CS) which you will turn in as the first page of your lab report.

LECTURE ASSIGNMENT: Online OWL assigned homework due on Tuesday, September 7 at noon except "W" problems are due Friday, September 3 at noon.

Monday, August 30

Reading Assignment: Z Ch 2.9 (review) [know the ordering of elements in a binary covalent compound]; Z Ch 3.1 - 3.3 (review); H Ch 22-1, Box 22-4 [atomic masses; **know how to work with isotopic data** and use the proper number of significant figures to determine the RAM (relative atomic mass), isotopic mass, and isotopic abundance; know the basics of mass spectrometry and distinguish between electron impact ionization (EI), chemical ionization (CI), and MALDI (matrix-assisted laser desorption/ionization); be able to convert between atoms, moles, mass]

Wednesday, September 1

Reading Assignment: Z Ch 3.4 - 3.9 (review) [know how to determine percent composition by mass; **be able to determine an empirical formula** from % composition, mass data, combustion analysis, or other analytical data and to convert to a molecular equation; **know how to balance an equation** and to use the algebraic method when necessary; review the basics of stoichiometry and know how to determine amounts of reactants and products]

PRACTICE: Equations to Balance
HANDOUTS: Balancing by Algebraic Method

Friday, September 3

Reading Assignment: Z Ch 3.10 - 3.11 (review) [be able to do stoichiometric calculations involving a **limiting reactant**; know **yields: actual, theoretical**, and **percent**]