Chemistry 116 - Fall 2021
Dr. Audrey Dell Hammerich
12 - Week of November 7
Acids and Bases II

LAB ASSIGNMENT: Determination of the Molar Mass and Ionization Constant of a Weak Acid. You are not responsible for the questions on p. 10 of the lab writeup beginning with "Consider This" and also the questions on p. 11.

LECTURE ASSIGNMENT: Online OWL assigned homework due on Monday, November 15 at noon except "W" problems are due Friday, November 12 at noon.

Monday, November 8

Reading Assignment: H Ch 8-4 (systematic treatment of equilibrium) 9-1 - 9-3 [systematic approach to equilibrium - be able to write the charge balance equation and various mass balance equations, distinguish between the molarity of a solution (M) and the formality of a solution (F) where all the pieces that a species dissociates into are accounted for; apply the systematic approach to dilute solutions of strong acids and strong bases; notice how the systematic approach gives rise to one of the most useful formulas for equilibrium calculations: $\boldsymbol{K = x^2 / (F - x)}$, applicable to both weak acid dissociations and weak base dissociations weak bases]

Wednesday, November 10

Reading Assignment: H Ch 9-2 - 9-4 (weak acid and weak base dissociation); Z Ch 7.8 (acid-base properties of salt solutions) [be able to do weak acid and weak base calculations, employ the 1% or 5% rule or solve the quadratic; know how to calculate the fraction of dissociation (or % dissocation) for a weak acid and fraction of association for a weak base; understand how Le Ch*â*telier's Principle can be applied to the concentration dependence of dissociation; **hydrolysis** of salts and charged metal ion solutions, know when a salt solution will be acidic, basic, or neutral; what is a salt?]

Friday, November 12

Reading Assignment: H Ch 9-5 [What is the common ion effect and what is its relation to buffers?; be able to work with buffer solutions based upon molarity and be able to demonstrate that a solution is buffered by doing calculations where strong acid and/or strong base is added to the buffer; understand how the Henderson-Hasselbalch equation is just an extension of the normal expression for an equilibrium constant]