Chemistry 116 - Fall 2021
Dr. Audrey Dell Hammerich
4 - Week of September 12
Chemical Reactions II, Stoichiometry II

NOTE: The first exam covering the first four chapters in Zumdahl will be during our 12:00 - 12:50 lecture time on Monday, September 20.

NOTE: Brief quiz in discussion on Friday emphasizing material covered since the first quiz through this Wednesday's lecture, omitting the statistics in Harris.

NOTE: Reading in the Harris text is necessary to do the statistical analysis for H_Exp 5. H Ch 3-1 – 3-2 have already been covered in class and should be reviewed. The actual statistics is covered in H Ch 4-1 – 4-3 and 4-4 – 4-6.

LAB ASSIGNMENT: *Online* H_Exp 5: Statistical Evaluation of Acid-Base Indicators (H: Ch 3, 4-1 – 4-6, 7-1 – 7-2); submit prelab in Blackboard before period begins; due a Grubbs test on the data provided and **email the spreadsheet to Adrian with any outliers clearly marked within 24 hours of your lab period**; the analysis for Exp 5 will be performed on data with all data failing the Grubbs test removed.

LECTURE ASSIGNMENT: Online OWL assigned homework due on Monday, September 20 at noon (day of exam) except "W" problems are due Friday, September 17 at noon.

Monday, September 13

Reading Assignment: Z Ch 4.9; H Ch 7-1, 7-2 [learn the 7 **common strong acids** and the **soluble strong bases** from the lecture notes; be able to recognize Arrhenius acids and bases that follow the modified definition; know what autoionization and amphoteric mean; know the typical **reactions of acids and bases** including **acid and base anhydrides, carbonates, hydrogen carbonates, sulfites, hydrogen sulfites, and ammonium salts** and how to write their net ionic equationss; given an acid or base be able to identify its acid or base anhydride and given an acid or base anhydride be able to identify its acid or base; be able to do **acid/base titration** problems]

HANDOUT: Lewis Structures in Acid/Base Reactions

Wednesday, September 14

Reading Assignment: Z Ch 4.9 - 4.10 - 4.11; H Appendix D [finish up acid - base reactions; know how to name the H and OH acids from the lecture notes; know how to assign **oxidation numbers** to any species; in a redox reaction be able to identify what is oxidized, reduced, **oxidizing agent**, **reducing agent**, and to determine the total number of moles of electrons transferred in a reaction]

Friday, September 17

Reading Assignment: Z Ch 4.11 - 4.12; H Ch 16-4–16-6 [be able to **balance oxidation/reduction reactions** in acidic or basic solutions by the **half-reaction method**; be able to identify **disproportionation** reactions and balance them; be able to solve problems involving **redox titrations**]