Extra Credit Options

Students often ask if there is some extra credit that they can perform to improve their grade. The following extra credit options are available, but remember the word extra implies that extra work must be done to receive the credit. All extra credit options are available and may be obtained at www.cabrillo.edu/~dscoggin/Chemistry 1B/Extra Credit.

Video Experiments: (10 points/each)

Video experiments may be done for extra credit or as a replacement credit for missed laboratory work. The video experiments are on two-hour reserve at the reserve desk in the library. The video experiments are performed on a VHS video tape, that you the student must view, record the observed data in your laboratory notebook, set up and perform any necessary calculations on the observed data, make graphs if required and submit a written brief laboratory report by the due date in the syllabus.

- **Video Exp. #1 Magnetochemistry**  This experiment correlates with the chapter on coordination compounds (Chapter 23).
- **Video Exp. #2 Bomb Calorimetry**  The experiment is done in a constant volume “bomb” calorimeter on different organic compounds. The discussion of constant volume calorimetry is covered in Chapter 6. This experiment correlates well with both thermochemistry (Chapter 6) and thermodynamics (Chapter 20).
- **Video Exp. #3 Thermometric Titrations**  The experiment correlates with the chapters on stoichiometry, thermochemistry, acid-base chemistry (Chapter 18) solubility and complex ions (Chapter 19), thermodynamics (Chapter 20) and coordination chemistry (Chapter 23).
- **Video Exp. #5 Kinetic Study Using Spectrophotometry**  This experiment correlates extremely well with the concepts of chemical kinetics (Chapter 16).

MS Excel Exercises: (5 points/each)

The Excel analysis exercises require the student to use the MS Excel computer program to solve a problem. A brief written laboratory report must be submitted to receive credit for the exercise.

- **MSE #1**  Autoionization of Water
- **MSE #2**  Vapor Pressure as a Function of Temperature
- **MSE #3**  Decomposition of Nitrogen Dioxide
- **MSE #4**  Decomposition of Formic Acid

Miscellaneous Extra Credit Activities:

- **MS Word: Subscripts and Superscripts (5 points)**
- **Internet Bonus Activity Organic Compound Scavenger Hunt (5 points)**
- **Organic Compounds (5 points)**
- **Graphical Methods of Analysis: (10points)**
- **Buffer Worksheet (10 points)**