354 Lab Final Required Skills

Summary: you should be able to analyze data from any of the experiments that you did this quarter. You should be able to:

- Calculate ionic strength, and predict how it will effect activity
- Use activity coefficients
- Calculate enthalpy changes from internal energy changes for reactions
- Convert from molar area to mean molecular area
- Calculate rate constants and activation energy from kinetics data
- Use regression analysis to determine slope(s), y-intercept, and the uncertainties
- Propagate error, including use of general error equation (memorize)
- Use Maple for error calculations
- Interpret compression isotherm data

You may be required to use, but do not need to memorize these equations: Davies, Eyring, DNA-van’t Hoff, Clapeyron, Clausius-Clapeyron, and Szyszkowski. If you think that you might have to use an equation that isn’t on this list (hint: if you used it during the course, it might be needed on the final), please memorize it.