

## GY343 Petrology: Metamorphic Point Count and Paragenesis Lab

- I. Using the assigned thin section conduct a 400 point count using the point counting stage. Recalculate the counts to mineral modes (%). Turn this in as page 1. A spreadsheet is a handy way to calculate and print modal mineralogy.
- II. Plot the thin section composition on both the ACF and A'FK ternary plots. Use the 3 most abundant minerals that plot on each ternary to fix the position of the sample. Use Winkler (1979) as a guide for plotting mineral composition (pages 40-41).
- III. Discuss whether or not your sample reflects chemical equilibrium based on the ACF and A'FK results. Look for and note obvious textural evidence of dis-equilibrium, such as overgrowths of one mineral on another (ex. Chlorite mantling a garnet porphyroblast). Using the protolith diagram on page 45 speculate on the protolith composition.