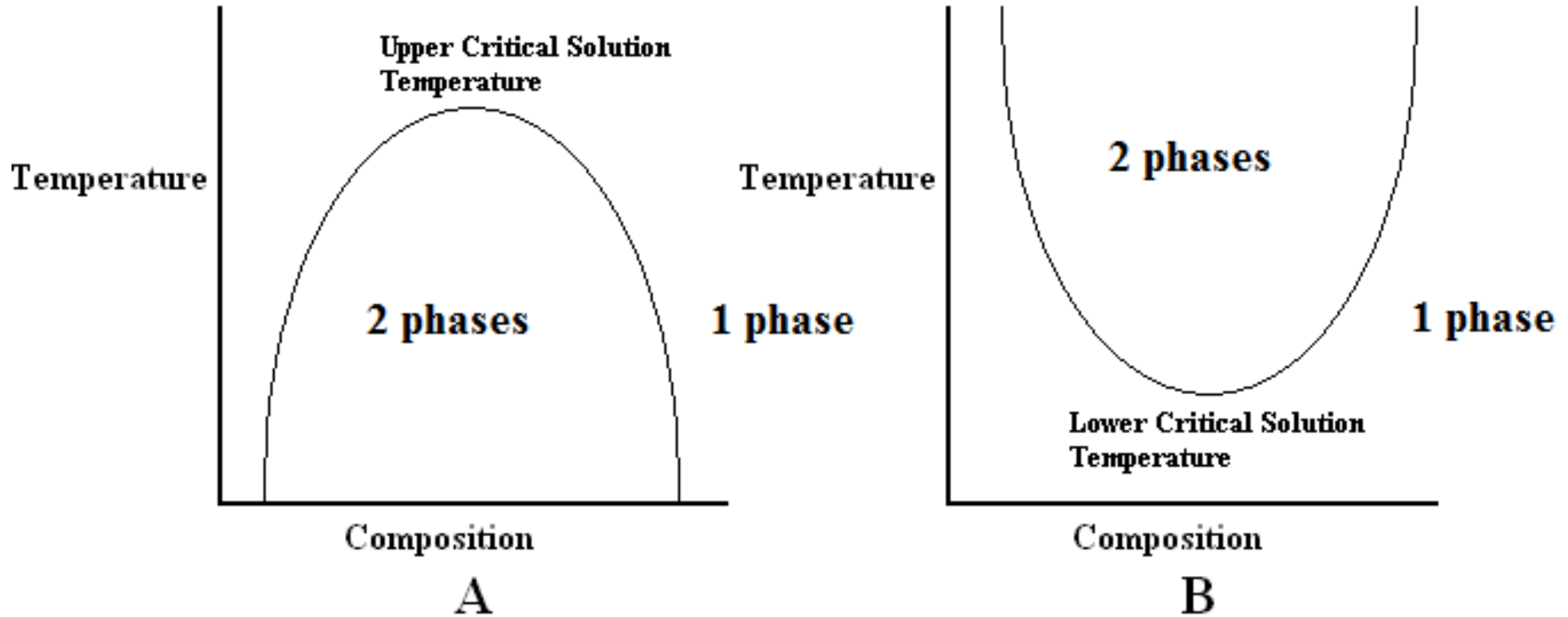


Chemistry 2201 Lab: EQUIL-LL

Goals:

- 1. Construct a phase diagram of a binary mixture.**
- 2. Determine the critical solution temperature and composition for the binary mixture.**

At certain temperatures and compositions you observe a homogeneous single phase or a 2 phase immiscible mixture.



Phase diagram is a plot of temperature vs. composition.

Degrees of Freedom

Number of variables that can be changed without disturbing the number of phases in the mixture.

$$F = C - P + 2$$

F: degrees of freedom

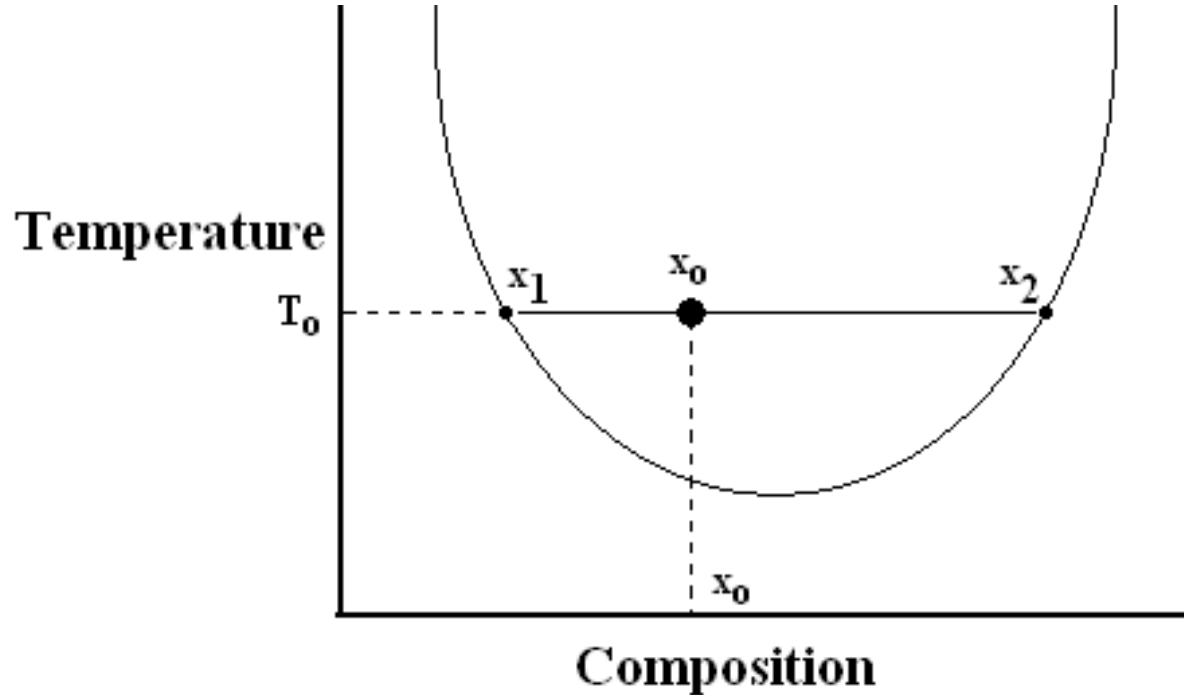
C: number of components

P: number of phases

Lever Rule

A rule to determine the relative amounts or masses of the two phases present in the mixture.

$$\frac{\text{amount of phase 1}}{\text{amount of phase 2}} = \left| \frac{x_0 x_2}{x_0 x_1} \right|$$



Lever Rule



NOTE: Apparatus must be clean.