# CHAPTER OVERVIEW

## 12: Applications of the Thermodynamic Criteria for Change

The equations we derive in Chapters 9 and 10 are the core of chemical thermodynamics. However, we have yet to deal with the effects of changing the concentrations of the substances present in the system. To apply our theory to chemical changes, we must extend our theory so that it can model these effects. In this chapter, we consider some basic applications that do not involve chemical reactions and in which both intermolecular interactions and the effects of mixing can be ignored. In Chapters 13-16, we develop the application of thermodynamic concepts to processes in which a chemical reaction occurs. We do so in two steps. In Chapter 13, we consider an approximation in which the properties of a multi-component system are determined by the effects of mixing pure substances whose molecules neither attract nor repel one another. In Chapter 14, we begin to consider the general case in which intermolecular interactions can be important.