

## CH365 CHEMICAL ENGINEERING THERMODYNAMICS

### **Lesson 11:** Application of the 1st Law to Ideal Gases

**Read:** Section 3.3, pp. 77-89

**Problems:** 3.17, 3.21

#### **Objectives:**

1. Explain why the internal energy of an ideal gas depends on temperature only.
2. Explain the relationship between  $C_P$  and  $\Delta H$  and between  $C_V$  and  $\Delta U$ .
3. Understand and be able to choose the correct equations for process calculations for an ideal gas.
4. Be able to describe and distinguish adiabatic, polytropic, isothermal, and isochoric processes.

#### **Notes:**