CHAPTER 3: ENERGY, WORK AND HEAT

CHAPTER OUTLINE

1. Forms of energy
   a. Stored energy
   b. Energy in transition
   c. Total energy

2. Work
   a. Definition
   b. Convention
   c. Work for a simple compressible substance (handout 3.1)
   d. Polytropic process
   e. Example of application (handout 3.2)
   f. Work calculation with discrete (P, V) points

3. Heat
   a. Definition
   b. Types of heat transfer
   c. Convention
   d. Adiabatic process

4. Summary

CHAPTER OBJECTIVES

- Introduce the concept of energy and define its various forms
- Discuss the nature of internal energy
- Define the concepts of heat and work