

## Chapter 4 Study Guide

Prior to lecture:

1. Read Ch. 4 in the textbook
2. Work through examples 4.1, 4.2 and 4.3.
3. On a sheet of paper, complete the “Take-Home Experiment” on page 120 of the text.
4. Read the “Work-Energy Theorem” on pages 108 and rewrite the theorem in your own words.
5. Read the “Problem-Solving Strategies for Energy” on pages 118. Rewrite the procedure in your own words.
6. Answer conceptual questions 2, 3, 4, 9, 15 and 17 on page 127-128 of the text.
7. Define the following terms:
  - a. Energy
  - b. Kinetic energy
  - c. Potential Energy
  - d. Work
  - e. Work-Energy Theorem
  - f. Mechanical Energy
  - g. Nuclear energy
  - h. Thermal energy
  - i. Radiant energy
  - j. Electrical energy
  - k. Chemical energy
  - l. Conservation of energy
  - m. Power
  - n. Horsepower
  - o. Nonconservative force
  - p. Conservative force

After lecture:

1. Review notes from lecture
2. Redo all example problems from lecture
3. Reread text
4. Work through examples 4.5, 4.8, 4.9, 4.10 and 4.11 of the text.
5. Complete the worksheet problems.
6. Answer conceptual questions 6, 12, 13, 19, 23, and 24 on pages 258-259 of the text.
7. Complete homework for chapter 4
8. For extra practice, try the following problems from chapter 4 of the textbook: 3, 5, 6, 10, 14, 17, 21, 24, 27, 28, 30