**Textbook:** Conceptual Physics, Paul G. Hewitt, Prentic Hall, 201102

## **Grade Determination:**

Semester Grade: Tests = 75 %; Classwork (Homework and Labs) = 25 %; Participation = Extra Credit

Final Grade:  $0.40 \times (\text{Semester } 1 + \text{Semester } 2) + 0.20 \times \text{Final Exam (Cumulative)}$ 

## **First Semester**

Chapter	Торіс
1	Topic 1: Nature of Science 1. Describing Science 2. Steps of the scientific method
-	Topic 2: Measurement 1. Accuracy and precision 2. Metric Units and Prefixes 3. Graphing
2, 10	Topic 3: Motion  1. Nature of motion  2. Acceleration  3. Center of mass
4, 5, 6	Topic 4: Forces 1. Newton's First Law 2. Newton's Second Law 3. Newton's Third Law
8	Topic 5: Energy 1. Nature of energy 2. Energy transformations 3. Sources of energy

## **Second Semester**

Chapter	Topic
8, 7	Topic 6: Machines  1. Work and Power  2. Using machines  3. Simple machines  4. Momentum
25	Topic 7: Waves  1. Nature of waves  2. Types of Waves  3. Wave properties  4. Wave Behavior
26	Topic 8: Sound  1. Sound waves  2. Music  3. Beats  4. Reverberation  5. Hearing
27–31	Topic 9: Light – Mirrors and Lenses  1. Light and Matter  2. Reflection and Mirrors  3. Refraction and Lenses  4. Total internal reflection  5. Using mirrors and Lenses
27	Topic 10: Electromagnetic Radiation  1. Nature of electromagnetic waves  2. The Electromagnetic Spectrum  3. Parts of the Electromagnetic spectrum  4. Using Electromagnetic Waves: Telecommunications
21, 22	Topic 11: Heat  1. Heat and Specific Heat  2. Thermal Energy  3. Heat Transfer  4. Heat Engines
19	Topic 12: Fluids  1. Pressure 2. Floating 3. Work with fluids