PHYS 212 Spring 2013 Study Guide for Test #3     Chapters 25, 26, & 27  
  
Test will consist of regular questions and problems.  
  
1. Chapter Reading.

2. Practice WileyPlus assignments.

**Chapter 25: Capacitors**  
Charge: http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c25/math127.gif Stored energy: http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c25/math134.gif

Capacitance of a Parallel plate capacitor:

**Capacitors in Parallel and in Series** The **equivalent capacitances** *C*eq of combinations of individual capacitors connected in parallel and in series can be found from:

http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c25/math132.gif http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c25/math133.gif

**Chapter 26:** Current (i), current density (J), resistance (R), and power (P):

http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c26/math136.gif http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c26/math138.gif http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c26/math143.gif http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c26/math057.gif

http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c26/math125.gif http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c26/math144.gif

7. Estimating the cost of electricity.

8. Semiconductors and Superconductors.

**Chap 27:** http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c27/math001.gif

Ohm’s law: v = iR Power: http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c27/math039.gif http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c27/math158.gif http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c27/math159.gif

**Resistors in Series and in Parallel:**

http://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c27/math160.gifhttp://edugen.wiley.com/edugen/courses/crs1650/art/math/halliday8019c27/math063.gif

Analyzing circuits using junction rule and loop rule.