Physics 105 S2011

HW #8 Due March 11 at the beginning of class.

READING: On Monday and Wednesday of the coming week we will be working through Ch. 21. The material in this chapter is conceptually quite difficult. The HW will consist of some hard conceptual problems and some quantitative problems that are not as tough. We will skip 21-9 to 21-14. On Friday we will have a quiz that will cover HW 6 and 7 – the second half of Ch. 19 and all of Ch. 20. The quiz will not cover Kirchhoff's Rules, since those were coverer on the exam. After the quiz we will start Ch. 22.

In class on Friday I mentioned an opportunity for extra credit – building a small simple motor. If you are interested, see me sometime before break to obtain materials. You could also use your own materials. Information about building a motor is readily available online. Do a Google search for Motor Science Project. Good sites listed include www.sciencebuddies.org, www.s

I will increase your final grade in the course by 1% for a motor that works. If it is able to achieve a rotational speed of over 600 rpm it will be worth 1.5%, and if it achieves over 1000 rpm or *in my opinion* contains original design elements, I will give up to 2%. When I test your motor I will use a regulated, 3V power supply.

Please hand in the HW in two parts. Part I: Ch. 21 Question #6, 10, 13

Ch. 21 Problems #1, 2, 5, 8

Part II: Ch. 21 Problem 10, 11, 13, 18(recall R=ρl/A), 23, 36

Part III: Mid term Survey