PHYS 2215, Physics for Scientists and Engineers I Laboratory

Fall 2012 Thursday 1:30-4:20 SCNCE 326

Instructor: Larry Smith SCNCE 111 283-7520 Larry.Smith@snow.edu http://www.snow.edu/larrys

Goals: The hands-on learning of physics is a lot of fun. The goals are to help students further understand concepts from the lecture section, give students practice using equipment and making measurements, to help students learn to analyze data, and to improve the ability of the students to communicate scientific results clearly.

Text: *PHYS 2215 Experiments* lab packet from Majock Books.

Other Materials: A scientific calculator. Recommended: your own protractor and metric ruler.

Corequisites: Concurrent enrollment in PHYS 2210. Prerequisite: Facility with spreadsheets (such as Excel)

Labs: The labs are the main component of this course (PHYS 2215) and will give you hands-on experience to complement the book and the lecture (PHYS 2210) discussions. You will turn in an individual write-up for each lab, even though you will work in groups (groups of 2 or 3 work best) during lab time to collect data. Buy the lab packet from Majock Books. Make sure your write-up is your own work, even though the data will be the same as your lab partners'. Do not do a group write-up nor copy others' write-ups. Please make your write-up so clear that a layman could easily understand what you did, even so clear that you could reconstruct the lab yourself using only your write-up 2 years from now. Neatness and clarity are at least as important as good data. Diagrams and graphs are very useful. Label everything (especially axes on graphs) and put units on every quantity. The write-ups are generally due at the **beginning** (1:29) of the next lab period. Late labs are worth 50% up to one week late; thereafter they will receive no credit; no late labs will be accepted after Dec. 3.

Help: The Physics Help-Ware simulations are to help you prepare for the in-class labs; also, some of the quiz questions may come from the HelpWare. There are Apple][gs computers available in the lab for the Help-Ware. You are encouraged to see me during my posted office hours (MTWF 10:30–11:20) and at other times by appointment. Students with disabilities desiring accommodations, academic adjustments, or auxiliary aids must contact the Accessibility Resource Center (ARC). The ARC determines eligibility for and authorizes the provision of these accommodations and services for the college. ARC: 241 Greenwood Center, (435) 283-7321, Katie.larsen@snow.edu.

Participation: Ask questions in lab, come to office hours, help other students. Don't just sit back and watch during the labs—actively participate. Attend regularly; come prepared, having studied the lab and associated resources on the class website beforehand. Have a great time learning about the physical world.

Policies: My policies regarding ADA, attendance, and academic dishonesty are on my website.

Quizzes: Short frequent quizzes will ascertain whether you have studied the experiment before coming to lab, including the web site. You may raise a quiz score by up to 50% by watching 2 episodes of the approved videos (see the class web site). Video reports are due December 6 at 5:00.

Final Exam: The final is Thursday, December 6, 1:30-4:20 in SCNCE 326.

Grading:				
	Participation/Attitude	10%	Quizzes	15%
	Lab Write-Ups	60%	Final Exam	15%