Reading: Sections 1.0 - 1.8, Appendix B
Sections 2.0 - 2.8
Homework: Chapter 1 - Questions 3,5
Problems 4,21,30
Chapter 2 - Questions 2,9
Problems 3,5,15,19,22,35,44,49,59,67,70
Problems (on the other side of this page): A,B

Dates:
• Reading Questions on Chapter 1, Appendix B … Wednesday, August 25, 8:00 a.m.
• Reading Questions on Chapter 2 ……………….. Friday, August 27, 8:00 a.m.
• Homework Due………………………………Tuesday, September 7, 5:00 p.m.

Homework may be turned in to your discussion group leader on Tuesday, or placed in the box outside of my office before 5:00 p.m.
Reading questions are to be submitted directly from the World Wide Web using the form available at http://www.nhn.ou.edu/~strauss/phys2424. (This page can be reached by following the links from the main OU page: OU → Academics → Arts and Sciences → Physics & Astronomy → Course Webpages → Physics 2414.) If you try to submit answers to the reading questions on the web, but the answers are rejected, please e-mail me at mgstrauss@ou.edu and describe the problem in detail. (This first set of Reading Questions on Chapter 1 and Appendix B will not be graded. You should turn them in to confirm that you can submit them from the World Wide Web without any problems.)

READING QUESTIONS FOR CHAPTER 1 AND APPENDIX B:
1. Are scientific theories usually applicable to any situation? Why or why not? 2. What do we mean by significant figures? 3. What are the rules for significant figures when we add, subtract, multiply, and divide? 4. What are the SI units of length and time? 5. How do you change from one set of units to another? 6. If you were traveling 65 miles per hour, how fast would that be in meters/second? 7. What is dimensional analysis and how can it be used? Final Question: What is one thing from the reading that you didn’t understand or need clarified?

READING QUESTIONS FOR CHAPTER 2:
1. What do we call the study of how objects move? 2. What do we call the study of why objects move? 3. What is the difference between speed and velocity? 4. What is the difference between velocity and acceleration? 5. What is the difference between an average quantity and an instantaneous quantity? 6. How does the instantaneous speed of an object relate to the instantaneous velocity of the same object at the same time? 7. What are some important steps for solving problems? 8. What quantity is the same for any object that is falling near the Earth (neglecting air resistance)? 9. What does this imply about the motion of different objects as they fall? 10. If an object is thrown straight up near the surface of the earth, is there some point in its flight (before it hits the ground) when its instantaneous velocity is zero? If so, where in the flight? 11. If an object is thrown straight up near the surface of the earth, is there some point in its flight (before it hits the ground) when its instantaneous acceleration is zero? If so, where in the flight? 12. On a plot of displacement vs. time, what does the slope represent? 13. On a plot of velocity vs. time, what does the slope represent? Final Question (must be answered to receive any credit on the reading assignment): What is one thing from the chapter that you didn’t understand or need clarified?
A) You and a friend are riding your bicycles along highway 9 on a beautiful Fall day. You are traveling at a leisurely 12 miles per hour when your friend passes you going 15 mph. You decide to accelerate so that you can catch your friend and pass her. If you accelerate at a constant rate of 0.25 miles per hour each second until you pass her, how long will she be ahead of you?

B) After attending the OU-Texas game in Dallas, your friend accidentally drove back to OU without you and left you stranded in Dallas. (Well it may not have been an accident since you did pass this competitive person during your “friendly” bike ride last weekend). You are standing on the top of a bridge that is 10 meters above I-35. In the distance you notice a truck loaded with mattresses that has an OU license plate and is heading north. If you can jump on to the back of this truck, you should be able to get a free ride to OU. You notice that the truck passes 3 telephone poles every 2 seconds and you know that the telephone poles are separated by 20 meters. If the bed of the truck is 1.5 meters above the road, how many telephone poles away from the bridge should the truck be so you can jump into the bed and get a ride back to OU?