PHY 115 – Spring 2014

Study Guide for the Midterm Exam

- The table below is a guide to the topics and concepts you will need for the PHY 115 Midterm Exam.
- The Midterm will be on Wednesday, February 19.
- Please bring a calculator. You may bring a note sheet.
- Today's (2/12) class material will *not* be included on the midterm.

Topic	**Relevant Concepts**	**Chapters/ Sections**	**Related to Assignment #**
Mathematics Review	Exponents Scientific notation and powers of 10 Solving equations (including quadratic) Linear and quadratic relationships	Chapter 0: 0.1 through 0.4	All
Models, laws and theories		Chapter 1: 1.1, 1.2	1
Measurements, units and estimations	Units and unit conversions Precision, accuracy and significant figures Order-of-magnitude estimations	Chapter 1: 1.3, 1.4, 1.5, 1.6	1
Vector and scalar quantities	Vector and scalar quantities in Physics	Chapter 1: 1.7	All
Kinematics: 1-D motion	Constant-speed motion Position and displacement Average and instantaneous: speed, velocity, acceleration Graphing constant-speed and accelerated motion	Chapter 2: 2.1 through 2.3	2, 3
Kinematics, 1-D motion: the Kinematic Equations	Uniformly accelerated motion: the Kinematic Equations Using graphs and kinematic equations to solve problems	Chapter 2: 2.4, 2.5	3
Free-fall: a particular case of uniformly accelerated motion	Applying the Kinematic equations to free-fall problems Graphing free-fall motion	Chapter 2: 2.6	3
Accelerated motion: constant and non-uniform acceleration	Differences between constant, average and varying (non-uniform) acceleration	Refer to lecture notes	Constant acceleration: assign. 2 and 3 Non uniform acceleration: assign. 2 (problem 4)

The review session:

The review class will be on Thursday, 2/13 (tomorrow), at 4:00 – 5:00 pm in Van Gogh. We will go over a few problems, but you may also have your own questions.

Office hours:

I will be in my office on Thursday 2/13, 10 am -12 pm and on Friday, 11 am – 12:30 pm. I can also be available at other times, but in this case you should schedule your appointment by email.

Please refer to the Academic support Center schedule for the tutor's hours.