

**SYLLABUS PHY-2065-U01, 1CR (PHY 2053 ProbSolving I),**

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**Lectures:** W 1700-1750, CP-151

**Office Hours:** Tuesday/Thursday Biscayne Bay North Campus, A1-329: 11:10 -12:10;  
 Wednesday Modesto A. Maidique Campus, CP243: 11-15:00

**Textbook:** College Physics 8th ed, Young/Geller, Addison Wesley

**COURSE DESCRIPTION**

This **one-credit hour courses** is a great supplement to PHY2053. It is intended to give you additional insights in how to solve the kinds of problems that you will encounter in your homework and on the exams. Various techniques and general rules of thumb for solving physics problems are covered. Covers kinematics, Newtonian mechanics, properties of fluids, thermodynamics, and wave motion. PHY 2065 strongly recommended for problem solving skill. Trigonometry (MAC 1114 or equivalent) should be taken prior to or concurrently with this course. Corequisite: PHY2053

**OBJECTIVES AND COMPETENCIES**

Through classroom discussion and textbook study you are expected to achieve a basic understanding of the topics covered by the course. You should be able to define the scientific terms used in the course and be able to explain the concepts to a fellow student. You need enough high school algebra background to understand exponents such as squares, cubes, and powers of ten. "Word problems" and equation solving are not a central issue and mathematical concepts will be fully explained as we encounter them in the course. The course includes the following topics:

Date	Chapter	Course Outline
8/22/2012	W 1/2	Models, Measurements, and Vectors, Motion along a Straight line
8/29/2012	W 3	Motion in a plane
9/5/2012	W 4	Newton's law of motion
9/12/2012	W 5	Applications of Newtons' laws
9/19/2012	W 6	Circular motion and gravitation
9/26/2012	W 7	Work and Energy
10/3/2012	W 8	Momentum
10/10/2012	W 9	Rotational motion
10/17/2012	W 10	Dynamics of Rotational Motion
10/24/2012	W 11	Elasticity and Periodic Motion
10/31/2012	W 12	Mechanical waves and sound
11/7/2012	W 13	Fluids Mechanics
11/14/2012	W 14	Temperature and Heat
11/21/2012	W 15	Thermal properties of matter
11/28/2012	W 16	The second law of thermodynamics
12/5/2012	W Recap	Recap chapter 1-16

**GRADING POLICY:**

Grades will be based 50% on attendance and 50% on in class exercises. You get one point for attending and one for reasonable participation in the exercises.

	A	B	C	D	F
Points	32-27	26-21	20-16	15-11	10-0

**ATTENDANCE:** Punctual, reliable attendance is expected. Excessive absence during a regular 16 weeks semester is defined as missing more than 4 classes for a course which meets 2 times each week.

**ACADEMIC INTEGRITY:** Cheating is considered a very serious offense and all offenders will be dealt with harshly. All students should be familiar with the [FIU Student Code of Conduct](#). Do not come to class to socialize! Anyone disrupting the class by talking, reading the paper or coming in late (or leaving early) will be asked to leave immediately.

**IN GENERAL: Don't get behind.** The material builds on itself and getting behind early will make it very difficult to catch up. Don't miss class; get notes from someone if you have unavoidable absence. Participate in class. Practice, practice, practice. Try to answer the conceptual questions and problems in each chapter. Try the worked examples in the book and from your notes ---- without peeking! Try problems that have solutions in the back of the book first. Draw a picture whenever possible. Pay attention to units. Don't expect to always work straight through a problem. Wrong turns and dead ends are often instructive. Check results to make sure they are reasonable.

**USE TWO DECIMAL PLACES**

a. The preceding digit is raised by 1 if the immediate insignificant digit to the dropped is more than 5. Ex: 4728 is rounded off to three significant figures as 4730.

b. The preceding digit is to be left unchanged if the immediate insignificant digit to be dropped is less than 5. Ex: 472 is rounded off to three significant figures as 472

c. If the immediate insignificant digit to be dropped is 5 then there will be two different cases

I) If the preceding digit is even, its is to be unchanged and 5 is dropped. Ex: 4.7258 is to be rounded off to two decimal places. The digit to be dropped here is 5 (along with 8) and the preceding digit 2 is even and hence to be retained as two only 4.7258=4.72

II) If the preceding digit is odd, it is to be raised by 1 Ex: 4.7158 is to be rounded off to two decimal places. As the preceding digit 1 is odd, it is to be raised by 1 as 2. 4.7158=4.72.

In general, make sure that you have enough decimal places of accuracy in your result. A good general rule is that your answer should have the same number of decimal places as in the input data, except if the first digit in your answer is 1. In that case, you should use one more decimal place in your answer.

*Florida International University is a community dedicated to generating and imparting knowledge through excellent teaching and research, the rigorous and respectful exchange of ideas, and community service. All students should respect the right of others to have an equitable opportunity to learn and to honestly demonstrate the quality of their learning. Therefore, all students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their fellow students, and the educational mission of the University. All students are deemed by the University to understand that if they are found responsible for academic misconduct, they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the Student Handbook.*

**Please turn off all cell phones and pagers during class.**

"I discovered I always have choices and sometimes it's only a choice of attitude!"