

HOMEWORK AND SYLLABUS FOR PHY 2053C, VENICE CAMPUS FALL, 2010

HW for Week One: Purchase the text (the EIGHTH edition textbook) and do Problems 9,10,14,23,41, 43 and 45 in Ch. 1, and also review any math deficiencies that were apparent from the math exercises that were done in class. In addition, go to the website <http://www.aw-bc.com/giancoli> and click on the book icon "Physics by Giancoli" (which has a picture of a mountain on the cover) and select Ch 1 and find **Practice PROBLEMS** on the left menu and complete problems # 2,5,9 and 10 , and submit them to me vial email (my email address is wetzk@scf.edu) by Monday Aug 30 at 11 AM **LATEST** for 1 point towards the homework portion of your grade.

Course Syllabus:

NATURAL SCIENCE DEPARTMENT

PHY 2053C: GENERAL PHYSICS I LECTURE

FALL 2010

<p><u>Instructor:</u> Dr. Karen Wetz</p> <p><u>Office Number:</u> 619, Venice Campus</p> <p><u>Office Hours:</u> Posted on office door or by appointment.</p> <p><u>Telephone:</u> 941-408-1490</p> <p><u>Email Address:</u> wetzk@scf.edu</p> <p><u>Web Page:</u> http://www.wetz.org/karenwetz/classes</p> <p><u>Department Website:</u> http://www.scf.edu/pages/179.asp</p>	<p><u>Course Coordinator:</u> Dr. T.F. Zheng</p> <p><u>Office Number:</u> 25-125</p> <p><u>Office Hours:</u> Posted on office door or by appointment.</p> <p><u>Telephone:</u> 941-752-5223</p> <p><u>Email Address:</u> zhengt@scf.edu</p> <p><u>Web Page:</u> http://www.scf.edu/pages/139.asp?bcid=726</p>
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Course Description:

PHY.2053C General Physics I (4)(A.A.).

Three hours lecture, three hours lab per week. Prerequisites: Completion of MAC 1140 and MAC 1114, or MAC 2147, or MTB 1321 and MAC 1105, with a grade of "C" or better. This course meets Area V requirements for the A.A./A.A.S./A.S. general education requirements. This course is a comprehensive noncalculus study of fundamental concepts of natural laws, especially as they apply to mechanics, heat and sound. Additional special fees are required. Students who already have credit for PHY 2048C or PHY 2049C cannot subsequently get credit for PHY 2053C.

Course Performances Standards: Students may access course performance standards by clicking on the "Course Performances Standards" link at the following web address:

<http://www.scf.edu/Academics/CoursePerformanceStandards.asp> . A hard copy may be obtained from the instructor or from the Department Office.

Text Materials:

1. "College Physics", by Serway, 8th Edition, Cengage Publishers, 2009, ISBN 9780495386933.
2. Scientific pocket calculator that is capable of roots, exponents, logarithms, etc.
3. 12 inch ruler with both inches & centimeters, protractor.

Attendance Policy: See the current SCF catalog. Punctual and regular attendance is expected. The attendance is taken according to registered seat. **Students must sit in their registered seats!** If you know you will miss a class, inform the instructor ahead of time; if you do not know ahead of time, inform the instructor as soon as possible of the circumstances. **If you miss more than three (3) lectures and laboratories, in total, you are subject to being dropped from the class by the instructor.** Consideration of "extenuating circumstances" will be up to the judgment of the instructor. If you miss a class, it is your responsibility to obtain notes, handouts, etc.

Tardiness: A chronically tardy student is disruptive to the class. Therefore, please make every effort to be on time. Everyone may at times have to be late to class, but do not make a habit of it. **You are allowed to be late to class three times without penalty. After that, your final grade will be reduced one point for each tardiness.**

Grade Policy:

1. Three tests are noted in the Lecture Schedule. The date of comprehensive final exam will follow the published college schedule. There will be no make-up final exam!
2. The grading scale is as: 100-90 A; 89-80 B; 79-70 C; 69-60 D/ below 60 F.
3. The course grade will be determined from a weighted average of three tests (40%), final exam (25%), online homework assignments (10%), and laboratory work (25%).

Withdrawal Policy:

*In accordance with the State College of Florida policy, as stated in the college catalog, students may withdraw from any course, or all courses, without academic penalty, by the withdrawal deadline listed in the State College of Florida academic calendar. This semester, the withdrawal date is **Oct. 29, 2010**. Students should take responsibility to initiate the withdrawal procedure but are strongly encouraged to talk with their instructors before taking any withdrawal action. In addition, students should note that faculty may also withdraw students for violating policies, procedures or conditions of the class, as outlined in individual class syllabi, and such action could affect financial aid eligibility.*

Standards of Conduct: Students are expected to abide by all SCF Student Handbook guidelines.

Tentative Course Schedule:

Week 1	Introduction, Math Review, Vector Techniques	Chap.1, 3
Week 2	Vector Component, Velocity, Acceleration, Vector Techniques	Chap.3, 2
Week 3	Free Fall, Two-Dimensional Motion	Chap.2, 3
Week 4	The Introduction to Dynamics, Newton's Laws	Chap.4
Week 5	Applications of Newton's Laws	Chap.4
Week 6	Circular Motion & Torque and Rotational Motion	Chap.7, 8
Week 7	Static Equilibrium	Chap. 8
Week 8	Applications of Torque	Chap.8
Week 9	Energy and Work	Chap.5
Week 10	Momentum and Collision	Chap.6
Week 11	Vibrations	Chap.13
Week 12	Fluid Mechanics	Chap.9
Week 13	Temperature, Kinetic Theory of Gases	Chap.10
Week 14	Specific Heat, Latent Heat,	Chap.11
Week 15	Laws of Thermodynamics	Chap.12
Week 16	Laws of Thermodynamics, Summary	Chap.12, 1-12
Week 17	Final Exam – the week of Dec. 8th	All chapters above

Test 1: Monday, Sept. 20 Chap.1-3
Test 2: Monday, Oct. 18 Chap.4, 5, 7,8
Test 3: Monday, Nov. 22 Chap. 5, 6, 8, 9, 10, 13

College Holidays/Important Dates – No Classes

Monday, Sept 6 – Labor Day
Friday, Oct. 8 – Faculty Development Day
Thursday, Nov 11 – Veterans Day Observed
Nov 24-28 – Thanksgiving Holiday
Dec 13-16 – Final Exam Week

Additional Information:

The focus will be on:

1. **Lecture:** A clear understanding of the basic phenomenon and principles, laws of science, the establishment of a correct picture on each branch of science.
2. **Lab.:** Hand on experience through demonstrations and experiments ----- Learn by Doing
3. **Mathematics:** The development of students' abilities to apply mathematics and Physics equations to practical problems.

Physics is a "**tough**" subject. It contains many principles, laws and theories, which require much abstract thinking and logical derivation. It employs a lot of mathematics compared with other courses. For successful fulfillment of this course, you will need to read the material **before** it is discussed in the class; you need to listen carefully in class and take good notes, you will need to solve the problems independently, and you will need to estimate the physics results correctly. In the learning process of the course, students should do their part which is required, and if anybody encounters difficulties, the instructor is always there to help and guide the individuals. Let's work as a team and the satisfaction depends on your cooperation and willingness to learn.

Expectations of the Students by the Instructor:

1. To work diligently, seriously and independently.
2. Students are given opportunities to demonstrate their understanding through, tests and the comprehensive final exam.

Problem Solving and Homework

There are four three-hour Problem-Solving Labs. in whole semester, which are designed for enhancing students' ability of problem solving. It is very important that you work as many of the suggested homework problems as possible. It is expected that you will need at least 10 hours per week outside of class to solve these problems.

Lab Syllabus:

NATURAL SCIENCE DEPARTMENT

PHY 2053L: GENERAL PHYSICS I LAB

FALL 2010

<p><u>Instructor:</u> Dr. Karen Wetz</p> <p><u>Office Number:</u> 619, Venice Campus</p> <p><u>Office Hours:</u> Posted on office door or by appointment.</p> <p><u>Telephone:</u> 941- 408-1490</p> <p><u>Email Address:</u> wetz@scf.edu</p> <p><u>Web Page:</u> http://www.wetz.org/karenwetz/classes</p> <p><u>Department Website:</u> http://www.scf.edu/pages/179.asp</p>	<p><u>Course Coordinator:</u> Dr. T.F. Zheng</p> <p><u>Office Number:</u> 25-125</p> <p><u>Office Hours:</u> Posted on office door or by appointment.</p> <p><u>Telephone:</u> 941-752-5223</p> <p><u>Email Address:</u> zhengt@scf.edu</p> <p><u>Web Page:</u> http://www.scf.edu/pages/139.asp?bcid=726</p>
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Course Description:

PHY 2053L General Physics I Lab(0)(A.A.).

Companion lab to PHY.2053C. Additional special fees are required.

Course Performances Standards: Students may access course performance standards by clicking on the "Course Performances Standards" link at the following web address:

<http://www.scf.edu/Academics/CoursePerformanceStandards.asp> . A hard copy may be obtained from the instructor or from the Department Office.

Text Materials:

1. "Physics Laboratory Manual", by Loyd, 3rd Edition, 2008, Cengage Publ., ISBN: 9780495114529
2. Scientific pocket calculator that is capable of roots, exponents, logarithms, etc.
3. 12 inch ruler with both inches & centimeters, protractor.

Attendance Policy: See the current SCF catalog. Punctual and regular attendance is expected. If you know you will miss a class, inform the instructor ahead of time; if you do not know ahead of time, inform the instructor as soon as possible of the circumstances. **If you miss more than three (3) lectures and laboratories, in total, you are subject to being dropped from the class by the instructor.** Consideration of "extenuating circumstances" will be up to the judgment of the instructor. If you miss a class, it is your responsibility to obtain notes, handouts, etc.

Tardiness: A chronically tardy student is disruptive to the class. Therefore, please make every effort to be on time. Everyone may at times have to be late to class, but do not make a habit of it. **You are allowed to be late to class three times without penalty. After that, your final grade will be reduced one point for each tardiness.**

Grade Policy:

Each lab report is worth 10 points in maximum. The total lab points comprise 25% of your course grade.

College Withdrawal Policy: *In accordance with the State College of Florida policy, as stated in the college catalog, students may withdraw from any course, or all courses, without academic penalty, by the withdrawal deadline listed in the State College of Florida academic calendar. This semester, the withdrawal date is **Friday Oct. 29, 2010**. Students should take responsibility to initiate the withdrawal procedure but are strongly encouraged to talk with their instructors before taking any withdrawal action. In addition, students should note that faculty may also withdraw students for violating policies, procedures or conditions of the class, as outlined in individual class syllabi, and such action could affect financial aid eligibility.*

Standards of Conduct: Students are expected to abide by all SCF Student Handbook guidelines.

Course Assignments:

1. Pre-lab assignments: These must be completed before you come to the Lab.
2. Hand in a clear lab report at the beginning of the next lab class. The instructor will give maximum of five points for a late report, and zero points if it is handed in after the graded reports have been returned.

TENTATIVE LABORATORY SCHEDULE

Week	EXP	TOPIC	PRE-LAB	POST-LAB
Week 1		Lab Orientation	---	---
Week 2	1	Measurement of Length	---	---
Week 3	3	Force Table	---	---
Week 4	Problem 1	Kinematics & Motion Preview	Chap.1-3	---
Week 5	Comp.1	Motion-1 -- Computerized Exp.	---	---
Week 6	Comp.2	Motion-2 -- Computerized Exp	---	---
Week 7	Comp.3	Newton's Laws-2 -- Computerized Exp	---	---
Week 8	Problem 2	Dynamics	Chap. 4, 8	---
Week 9	10	Torque	---	---
Week 10	2	Measurement of Density	---	---
Week 11	Problem 3	Energy, Momentum, Circular Motion, Liquid	Chap. 5, 6, 7, 8, 13	---
Week 12	16	Centripetal Acceleration	---	---
Week 13	20	Hooke's Law and Harmonic Motion	---	---
Week 14	Comp.4	Temperature and Thermal Equilibrium	---	---
Week 15	Problem 4	Heat, Gas, Thermodynamics	Chap. 10, 11, 12	---
Week 16		Make-up Lab	---	---

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Friday, Oct. 8 – Faculty Development Day
Thursday, Nov 11 – Veterans Day Observed
Nov 24-28 – Thanksgiving Holiday
Dec 13-16 – Final Exam Week

Additional Information:

The aim of the laboratory exercise is to give the student an insight into the significance of physical ideas through actual manipulation of apparatus, to bring him or her into contact with the methods and instruments of

physical investigation, and to explore new technology application in science. Each exercise is designed to teach or reinforce an important law of physics which, in most cases, has already been introduced in the lecture and in the textbook. Thus the student is expected to be acquainted with the basic ideas and terminology of an experiment before coming to the laboratory. The exercises in general involve measurements, graphical representations of the data, and calculation of a final result. The students should bear in mind that in many cases the instruments provided are not precision instruments and in consequence no very great importance can be attached to the accuracy of the final numerical result. The success of an experiment lies rather in the degree to which the student has:

1. mastered the physical principles involved.
2. understood the theory and operation of instruments employed.
3. realized the significance of the final conclusions.