

# SYLLABUS (Summer 2013)

Valencia College – West Campus

Course Number /CRN	PHY1007C/33999
Course Credits	Four (4) credits Three (3) Lecture hours Three (3) Lab hours
Instructor	Dr. Vikas SUDESH
E-mail	vsudesh@valenciacollege.edu
Prerequisite:	Minimum grade of C in MAC 1105 or higher.
Textbook	Introduction to Biological Physics for the health and life sciences by Kirsten Franklin, Paul Muir et. al. (ISBN 978-0-470-66592-3; ISBN 978-0-470-66593-0)
Supply	Scientific Calculator
Lectures Schedule	Mon. / Wed. 1:15 pm – 2: 50 pm. MAY 06 to JUL 30, 2013
Room for lecture	Bldg.1, room 153
Recitations schedule	WED. 3:00 pm – 4:00 pm
Room for recitation	Bldg. 1, room 153
	<a href="http://frontdoor.valenciacollege.edu/?vsudesh">http://frontdoor.valenciacollege.edu/?vsudesh</a>

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## **Teacher Availability**

As adjunct faculties are on campus only for the lecture time, I cannot offer office hours when I can be reached. However, I can be contacted anytime by email at [VSUDES@VALENCIACOLLEGE.EDU](mailto:VSUDES@VALENCIACOLLEGE.EDU). To help me quickly identify your emails as legitimate be sure to write "PHY 1007C" in the subject box of the email. I will check my emails several times a day every day, weekends included. During the first week of the course, we will make sure that your emails can reach me and mine can reach you and neither gets blocked by spam filters. I will answer all your emails promptly and thoroughly. Also, I am willing to meet you before and after the class, to discuss any doubt or question you may have. I will do everything I possibly can to provide help when you need it.

## **Objective of the course**

- One-semester course for health-related majors.
- This course is intended as a general introduction to Physics. Applications of physics to principles of mechanics, heat, light, sound, electricity and magnetism as they apply to health field will be covered.
- The course has a very practical orientation: the focus is on the understanding of physical phenomena and their description; theoretical discussions and calculations are kept to a minimum. Every argument covered by the course is the investigation of a different portion of the reality around us. The notions learned by the students in this course will help them to better understand the world they live in, and will form a solid base for more advanced Physics courses.

## **Lectures content and Attendance Policy.**

- Participation to lectures is mandatory. Exceptions can be accepted in particular situations, such as a serious sickness, a major family problem etc., which should be discussed with the teacher as soon as possible.

- Each student will start the term with 5 points of credit. Each unjustified absence to a lecture, or a delay of 30 minutes or more, will cause loss of 1 point. However, it should be remembered by every student that the more severe punishment for missing a lecture is in fact self-inflicted: an opportunity is missed to have a specific and important subject explained in details. What has been presented thoroughly in a lecture will not be explained a second time for the benefits of the students who missed that class: this is obviously done out of respect for those students who attend diligently all lectures.

- The textbook is solely intended as an educational support to help the students reviewing what is presented during the lectures. Some material will be covered during lectures, which is not available in the textbook. The students are responsible for all course content/information regardless if the content/information was presented in the written material of the textbook.

**Tests and Grade assignment.**

- There will be 3 unit tests, plus a Comprehensive Final Exam. Participation to the tests and exam is even more strictly enforced than to the lectures: **a test should be missed only under extreme circumstances.**

- In case a student misses one test under an **extreme circumstance, discussed with and accepted by the teacher**, then that student will have the opportunity of taking **one and only one make-up** test. The make-up test will be taken at the Testing Center of the campus, in accordance with the campus policy for such procedure (see the student guide for details). Still, I would like to insist that a student will be allowed to make up a test only for missing a previous one under a **really extreme and unavoidable** circumstance. In particular, I cannot guarantee a make-up test to the student who misses the Comprehensive Final Exam.

- Taking good notes during class and keeping them well organized are helpful in achieving good grades in the course. Students **MAY** be authorized to use a list of formulas they have prepared, during the Comprehensive Final Exam, but not during the 3 unit tests. The teacher will communicate in good advance what material the students are allowed to use during the Comprehensive Final Exam. On the contrary, the use of the textbook or any other book during either the Tests or the Final Exam is not allowed. Of course, cellular phones or other communication devices are not allowed anytime during classes, tests and exams. **Cellular phones cannot be used as calculators.** Scientific, non-programmable calculators are allowed for Tests and Final Exam.

- Each test, including a Comprehensive Final Exam, will assign a maximum of 15 points.

- Lab Reports and HW/Quiz will be worth 20 points and 15 points, respectively. These, plus the **5 attendance credit points**, correspond to a total of 100 maximum points: no extra points will be assigned for homework or projects, no extra test will be organized other than the previously-mentioned ones. The final grade will be assigned based on the total number of points gained by a student, according to the table below:

Tests	45 points
Homework/Quiz	15 points
Attendance	5 points
Lab Reports	20 points
Final	15 points

Points	Grade
90 to 100	A
80 to 89	B
70 to 79	C
60 to 69	D
less than 59	F

Please note the points will not be rounded, that means 89.9 is a 'B,' and 79.9 is a 'C.'

## LABORATORY REPORT

Laboratory: There is a laboratory component to this course. A lab report is required for each experiment. This report must be written in your own words, and should follow the following format:

Page 1: Title Page: This page must show the course, followed by the number and title of the experiment. It must also have your name, all group members' names and the date the experiment was performed. The title page should also write the name of the member who wrote the report (note: individual reports are required from each student).

### Example of Title Page

PHY1007C

M4a: Measurements

Date: February 2, 2013

Performed by Ryan Adams and Jennifer Richardson

Report written by Jennifer Richardson

Other subsections to be included in report are:

Introduction: Must include the main objective/s and theory behind the experiment.

Equipment: List all relevant apparatus and give a brief description of each.

Procedure: How the experiment was performed in your own words. What was used during the experiment and why.

Results: This section includes all graphs and data collected from the lab. Show all calculations. You may either attach data sheets you did in the lab with the stamp or you may reproduce these data sheets for the report, however you still need to attach the sheet with the stamp.

Conclusion: How were the main objectives accomplished through this lab? What could be the source of any error? How does doing this lab pertain to or help you in your field?

**NOTE: All students are required to attend the Lab Orientation. The orientation schedule can be accessed at the physics lab website, and is also posted on the door to the physics lab; Bldg 2, Room 201.**

**Late Lab reports will not be graded. Lab reports cannot be submitted by email.**

**Web site for Physics Lab: <http://science.valenciacollege.edu/>.**

### General Considerations and Hints

- Students should try to come to class prepared. Though the above-reported schedule can vary during the course, the subject of each lecture will be announced at the end of the previous one, and the students will be told where in the textbook they can start studying that subject in advance. Reading about a subject before entering the class is a great way of getting the most out of that lecture, and it is strongly encouraged.

- Students should also try to participate actively in each class. Asking questions is strongly encouraged, during and after classes. It should be remembered that not all the subjects covered by the course are in the textbook, thus **taking accurate notes and organization of the notes** are essential to prepare for the Tests and the Final Exam.

- Students are also encouraged to form study group, compare and exchange their notes. This, of course, should be done in an honest and fair way. Selling, buying, giving personal study

notes in return for any kind of exchange or obtaining them by threat will be considered cheating and punished accordingly.

**Policy on cheating**

- Cheating is the worse behavior a student can have and it will not be tolerated. By cheating a student dishonors himself/herself and offends his/her schoolmates, the teacher and the school he/she is attending.

- Talking during a test/exam, bringing forbidden material, fabricating false information to be excused for a missed test, **will be severely punished and may result in an F grade at any time.**

- Obtaining or giving notes from a fellow student in a dishonest way, as previously explained, will also be considered as cheating.

**Withdrawal**

- For drop/add and course withdraw dates and procedure, please refer to the student guide and the Academic Calendar.

Disclaimer: The course syllabus and/or planned schedule of topics may be altered at the discretion of the instructor.

**Specific Subjects and Units of the course**

- This syllabus is **TENTATIVE**. Depending on the class progress, the format, the tests and the covered subjects may be changed.

<b>TENTATIVE SCHEDULE</b>
UNITS AND CHAPTERS
<b>Unit 1: Mechanics</b>
Chapters 1 & 2 : Kinematics; and Force and Newton's Laws of Motion
Chapters 3 & 4: Motion in a Circle and Statics
Chapter 5: Energy
Chapters 6 & 7: Momentum; and Simple Harmonic Motion; Chapter 8-9 : Elasticity and Waves: Sound
Labs – M4a and M9c
<b>Unit 2: Bulk Materials</b>
Chapters 10-12: Elasticity : Stress and Strain; Pressure; and Chapters 13-16 : Surface Tension and Capillarity;
Buoyancy Labs – T5a
Chapter 17-21: Thermodynamics
Labs – T3a
Labs – S2a and S7a
<b>Unit 3: Electricity and DC circuits</b>
Chapter 23-27: Electricity and DC Circuits
Labs – E4a and E12a
<b>Unit 4: Optics</b>
Chapters 29-31
Labs – A5a