Charles Drew University

PHY 250 – General Physics I   Fall 2016

Syllabus

Lecture: Tuesdays 1:00 pm to 4:00 pm
Lab: Thursdays 1:00 pm to 4:00 pm
Locations: Keck 231, SESC
Units: 4
Instructor: E. Rodrigo, Ph.D.
Office: Keck 219
Office Hours: Mondays 3:00 to 5:00 pm or by appointment
Email: enricorodrigo@cdrewu.edu

Textbook: *College Physics, Volume 1*, Edition: 8th by H. Young and R. Geller
                 ISBN-11: 0-8053-7822-7
Website: www.webfilesuci.org/phy250

Course Content

An introduction, emphasizing biomedical applications, to fundamental concepts of classical physics including: kinematics, dynamics, energy and momentum conservation, periodic motion, fluids, and thermodynamics.

Student Learning Outcomes

You will be to able **demonstrate** understanding of the course content through satisfactory performance of on a comprehensive examination.

You will be able to **apply** algebra and trigonometry to mathematically **describe** physical systems relevant to the course content.

You will be able to **use** mathematical descriptions of physical systems to **compute** the value of unknown quantities.

You will be able to **produce** a proper laboratory notebook by collecting experimental data, estimating error in the data, drawing valid conclusions from the data, preserving data integrity, and recording all aspects of experiments.

You will be able to **use** information technology to **compute** solutions to problems in physics.

You will be able to **interpret** graphical and tabular representations of data

You will be able to **differentiate** between ethical and unethical conduct in science.

Tests

There will be 5 quizzes, 4 regular exams, and 1 final exam. Each quiz counts for 1% of your grade, each regular exam for 10%, and the final exam for 20%. All tests will be given at the start of class. The final exam will occur on Tuesday December 13, 2016. A missed test will receive a score of 0. *There will be no make-ups for missed tests.*

Homework

There will be 5 homework assignments, each of which count for 1% of your grade. Homework assignments will be graded as "complete" or "incomplete". Completed assignments, showing an honest attempt to solve each problem, will receive 10 points. Incomplete assignments will receive 0 points. *Late assignments will not be graded.*

Lab

The lab component of this course that is virtual and will normally be conducted within the Student Education and Services Center. The physical labs will occur in Keck 120. The lab constitutes 30% of your grade.

Attendance

Expected but not required. Note, however, that the best indicator of the content of the quizzes and exams is the material covered in class. You are responsible for all information imparted in class including corrections to the syllabus and schedule.

Grading

Homework	5%	50 points
Quizzes	5%	50 points
Regular Exams	40%	400 points
Final Exam	20%	200 points
Lab	30%	300 points

	100%	1000 points

Minimum points to receive particular letter grades are shown below.
➔ M = Median total points of students in the class.

Letter Grade	Minimum Points Required
A	the lesser of 933.3 and M + 183.3
A^-	the lesser of 900.0 and M + 150.0
B^+	the lesser of 866.7 and M + 116.7
B	the lesser of 833.3 and M + 83.3
B^-	the lesser of 800.0 and M + 50.0
C^+	the lesser of 766.7 and M + 16.7
C	the lesser of 733.3 and M – 16.7
C^-	the lesser of 700.0 and M – 50.0
D^+	the lesser of 650.0 and M – 100.0
D	the lesser of 600.0 and M – 150.0
D^-	the lesser of 550.0 and M – 200.0
F	0

Example 1: M = 600 ➔ 'A' requires 600 + 183.3 = 783.3
'B' requires 600 + 83.3 = 683.3; etc.
Example 2: M = 800 ➔ 'A' requires 933.3 (because 933.3 < 800 + 183.3)
'B' requires 833.3 (because 833.3 < 800 + 83.3); etc.

Note that this grading scheme does not guarantee that the highest scoring student will get an 'A'.
However, it does ensure that it is possible for every student to earn an 'A'.

Academic Dishonesty

There will be no tolerance of cheating. All policies regarding cheating that have been established by the department will be strictly enforced. Cheating includes, but is not limited to, lying to excuse an absence, receiving or giving assistance during a quiz or exam, using unauthorized materials or devices during a quiz or exam, plagiarism, and lying in any way in order to improve your grade. If you are found be cheating, you will automatically fail the course, and the Dean will be notified.

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Schedule of Lectures

Week	Date	Topic	Chapters
01	08-30-16	Units, Vectors	1-2
02	09-06-16	Motion	2-3
03	09-13-16	Newton's Laws	4
04	09-20-16	Applications of Newton's Laws	5
05	09-27-16	Circular Motion and Gravitation	6
06	10-04-16	Work and Energy	7
07	10-11-16	Momentum	8
08	10-18-16	Rotational Motion	9
09	10-25-16	Dynamics of Rotational Motion	10
10	11-01-16	Elasticity and Periodic Motion	11
11	11-08-16	Mechanical Waves and Sound	12
12	11-15-16	Fluid Mechanics	13
13	11-22-16	Heat and Thermal Properties of Matter	14, 15
14	11-29-16	0th and 1st Laws of Thermodynamics	16
15	12-06-16	The 2nd Law of Thermodynamics	16

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Schedule of Assignments and Tests

Week	Date	Item Due	Points	% of Grade
01	08-30-16		0	0%
02	09-06-16	Homework 1	10	1%
		Quiz 1	10	1%
03	09-13-16			
04	09-20-16	Exam 1	100	10%
05	09-27-16	Homework 2	10	1%
		Quiz 2	10	1%
06	10-04-16			
07	10-11-16	Exam 2	100	10%
08	10-18-16	Homework 3	10	1%
		Quiz 3	10	1%
09	10-25-16			
10	11-01-16	Exam 3	100	10%
11	11-08-16	Homework 4	10	1%
		Quiz 4	10	1%
12	11-15-16			
13	11-22-16	Exam 4	100	10%
14	11-29-16	Homework 5	10	1%
		Quiz 5	10	1%
15	12-06-16			
16	12-13-16	Final Exam	200	20%
			700	**70%**