RICHLAND COLLEGE DEPARTMENT OF PHYSICS
School of Mathematics, Science, and Health Professions
Syllabus:Instructor reserves the right to amend this information as necessary

Course Information

Title: Elementary physics II

Number: **PHYS 1407 - 83005 Fall 2019 (4 Cr. Hrs.)**

Times: Lab – F, 02:20 PM – 05:10 PM, SH 229

Lecture – M, W 02:20 PM – 03:40 PM, Y104

Instructor: PRISCILLA ASIGBEE

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Textbook

- Conceptual Physics -12th Edition, by Paul G. Hewitt, ISBN 9780321909107

Supplemental Materials

- "Physics 1405 Laboratory Manual" by Xiang-Ning Song; on eCampus (free, but you are responsible to print and bring appropriate pages to the lab)
- Paul G. Hewitt, Practice Book for Conceptual Physics, 12th Edition, ISBN: 9780321940742

Class Focus

Conceptual level survey of topics in Physics intended for liberal arts and other non science majors. Topics include wave motion, acoustics, electricity, magnetism, optics, relativity, atomic and nuclear physics. The history of scientific developments and their impact on daily life are discussed. Also included are laboratory experiments that emphasize a conceptual understanding of Physics.

Prerequisites

College level ready in Reading: Developmental Reading 0093 or English as a Second Language (ESOL) 0044 or have met the Texas Success Initiative (TSI) standard in Reading.

Course Objectives/Learning outcomes:

The specific objectives are: To understand and apply a method and appropriate technology to the natural sciences; to recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry; to communicate findings, analyses, and interpretation both orally and in writing; to recognize the influences and contribution of science to modern culture.

Core Curriculum Intellectual Competencies:

1. *Reading*: The ability to analyze and interpret a variety of printed materials – books, documents, and articles.
2. *Speaking:* Communicate orally in clear, coherent, and persuasive language appropriate to purpose, occasion, and audience.
3. *Listening*: Analyze and interpret various forms of spoken communication, possess sufficient literacy skills of writing and reading.
4. *Critical Thinking*: The ability to apply qualitative and quantitative skills to evaluate arguments and construct alternative strategies. Problem-solving is one of the applications of critical thinking.
5. *Computer Literacy*: Understand our technological society, use computer technology in communication, solving problems, and acquiring information.

Institutional Policies

Institutional policies relating to this course can be accessed from the following link www.richlandcollege.edu/syllabipolicies

Richland College's Quality Enhancement Plan ~ Learning to Learn: Developing Learning Power

The Quality Enhancement Plan Provides techniques, practices, and tools to help students develop the habits, traits, or behaviors needed to be effective and successful lifelong learners in college and in life.

Suggestions for Student Success:

To succeed in this course, you are expected to study the material from the textbook *in advance* of the corresponding class and then come prepared to discuss it and ask questions, as well as to work with others through several practice problems, rather than to listen passively and take notes. You may be quizzed at the beginning/ending of the class on study material. Class time will be used to *discuss* ideas (rather than to present them), to answer questions, to clarify points of confusion, and to practice doing physics. After reviewing the in-class notes you ought to integrate the material with what is explained more extensively in the textbook and become familiar with the concepts relative to the subject matter presented. *Only a solid knowledge of the material gives you a good chance to answer correctly the questions in the*

exams. ***If you need further assistance, tutors are available for all subject areas in the Center for Tutoring and Learning Connections (located in M-216) and Science Corner (located in the 2nd floor of Sabine). Also, professional and mature behavior is expected at all times, both in and out of class, towards all members of the class.***

Class Participation:

To gain a better understanding of the material, you are expected to be involved in class discussions. Each class period you will be asked to think about and answer questions related to the material. Your answers to these questions will be graded for participation, not correctness, but each question should help clarify your understanding of important concepts in physics. Your final grade may be increased by having a good participation in class throughout the semester.

Class Requirements:

Assignments:

You will be given homework assignments for each chapter (mostly). It is crucial that you complete and understand every assignment. The best way to learn in this class is to thoroughly work and understand the assigned problems.

Quizzes:

There will be several pop (or announced) quizzes given throughout the course. The score on each quiz will count as credit toward the final grade. There will be ***no make up*** for a missed quiz (unless for medical reasons with a doctor's note as proof).

Examinations:

Five examinations will be given in the course: four term exams and a final comprehensive exam. Each exam will involve several questions (closed notes and book, ***note card allowed for equations only***) similar to what is done in class and homework assignments. If you have attended all classes, thinking carefully about the concepts, and worked on your homework, the exams should be very straightforward.

Laboratory:

Laboratory experience is considered an essential part of the course. Students should make every effort to do a competent work and learn from the opportunities available in the lab. It is critical that you read the corresponding experiment in the laboratory manual before coming to each lab session. At the end of each lab, a lab report has to be completed. You will work in groups, but each person must turn in their own lab report, which represents your own work. Lack of participation and collaboration will affect your grade. Record your data in your lab book before leaving the lab. ***The completed lab report should contain a cover page (which can be downloaded on ecampus), data, calculations, and answers to questions. The cover page includes your name, lab partners' names, title of the lab, basic theories, conclusions and***

errors you encountered during the lab. Do NOT copy the objective, or theory from your lab manual. This is **plagiarism**, use your own words. Lab reports are due at the beginning of the next lab meeting. Late reports will **not be accepted** without permission. Each time an assignment or lab report is late; it will lose 10% of the grade.

NO INDIVIDUAL MAKE-UP EXAMINATION(except for medical reasons with a doctor's note as proof) OR EXTRA CREDIT WILL BE GIVEN. NO MAKEUP LABS; **Attendance is mandatory in order to receive credit for Lab Reports**.

Blackboard (myDCCCD) and eConnect

Blackboard (myDCCCD/eCampus) is the official online resource for the District and can be accessed at http://rlc.dcccd.edu (online tools and then eCampus). It is the student's responsibility to check this site periodically for posted announcements/assignments and to check the accuracy of their posted grades.

Attendance:

Attendance is absolutely necessary at every class and lab meeting. It is in your own interest to attend all classes. Material covered in class (sometimes not contained in the book) may appear in homework problems and/or exams. Attending class and paying attention is the key to a good grade. Professional and mature behavior is expected always, both in and out of class, towards all members of the class. Cell phones need to be set to silent or vibrate. ***No*** **phone calls, texting, or browsing the Internet is allowed during class.**

Grading Criteria:

Weight Factors:		**Grade Scale:**	
Homework	20%	90% - 100%	A
Laboratory	20%	80% - 89%	B
Attendance	10%	70% - 79%	C
Major Exams (4)	30%	60% - 69%	D
Final Exam	20%	Below 60%	F
Total	**100%**		

Important Class Dates

Tentative Test Schedule – Spring 2019[1]

EXAMS	**% OF GRADE**	**DATE**
EXAM 1	30% OF GRADE	February 13, 2019
EXAM 2		March 6, 2019
EXAM 3		April 3, 2019
EXAM 4		April 24, 2019
FINAL EXAM	20% OF GRADE	May 15, 2019 **(COMPREHENSIVE)**

Additional Class Information:

Drop Date: The last day to drop without a "W" on your transcript Monday, February 4th, 2018.

Withdrawal : Failure to attend class does not constitute as a withdrawal from the class. Failure to withdraw from a class after the final withdrawal date indicates your acceptance of the grade you are earning in the course. It is the student's responsibility to withdraw from the class. The official withdrawal deadline to receive a grade of "W" on your transcript for this semester is **Wednesday, April 17, 2019.**

[1] The instructor reserves the right to change this schedule upon proper notification.

TENTATIVE CLASS SCHEDULE[2]

Weeks	Monday	Reading Assignment	Wednesday	Reading Assignment
Week 1	Jan 21	No Class	Jan 23	Chap 19
Week 2	Jan 28	Chap 19	Jan 30	Chap 20
Week 3	Feb 4	Chap 21	Feb 6	Chap 21
Week 4	Feb 11	Chap 22	Feb 13	**Exam 1**
Week 5	Feb 18	Chap 23	Feb 20	Chap 23
Week 6	Feb 25	Chap 24	Feb 27	Chap 25
Week 7	Mar 4	Chap 25	Mar 6	**Exam 2**
Week 8	Mar 11	Spring Break	Mar 13	Spring Break
Week 9	Mar 18	Chap 26	Mar 20	Chap 26
Week 10	Mar 25	Chap 27	Mar 27	Chap 28
Week 11	April 1	Chap 29	April 3	**Exam 3**
Week 12	April 32	Chap 30	April 10	Chap 31
Week 13	April 15	Chap 31	April 17	Chap 32
Week 14	April 22	Chap 33	April 24	**Exam 4**
Week 15	April 29	Chap 33	May 1	Chap 34
Week 16	May 6	Chap 34	May 9	Chap 35
Week 17	May 13	**Final Review**	May 15	**Final Exam**

[2] The instructor reserves the right to change this schedule upon proper notification.

RLC, SH229 / Fall 2018/ Physics 1405 Lab Schedule

Availability Dates	Experiment Number/manual	Lab Session
1/22-1/28	1	**Lab 1:** ***The Speed of Sound***
1/29-2/4	2	**Lab 2**: ***Standing Waves on a Stretched String***
2/5-2/11	3	**Lab 3:** ***Electrostatic Charges***
2/12-2/18	4	**Lab 4:** *Equipotential and Electric Field Lines*
2/19-2/25	5	**Lab 5**: *Measurement of Resistance*
2/26-2/27		**Lab time: Lecture/Demo**
3/4-3/8	6	**Lab 6:** *Resistors in Series and Parallel*
3/18-3/22	7	**Lab 7**: *Magnetic Force*
3/25-3/29	8	**Lab 8:** *Magnetic Field*
4/1-4/5	9	**Lab 9**: *The Oscilloscope*
4/8-4/12	10	**Lab 10:** *The Internal Resistance of an AC Power Supply*
4/15-4/18	11	**Lab 11**: *Reflection and Refraction* **(4/19 class skipping this lab)**
4/22-4/26	12	**Lab 12:** *Thin Lenses and Lens Combination*
4/29-5/3	13	**Lab 13:** *Diffraction and Interference*
5/6-5/10	14	**Lab 14:** *Spectroscopy* **or Lab time: Lab test**
5/13-5/16		**No Lab**

Note: The guidelines and days in this syllabus are subject to change, deletion, or amendment at the discretion of the instructor.