

SYLLABUS: PHY1025-47745– Fundamentals of Physics – Summer 2013 - 3 credit hours

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Text Book (Required): Conceptual Physics, Paul G. Hewitt, 11th Edition

ISBN-10: 0-321-56809-5

ISBN-13: 978-0-321-56809-0

Class Schedule: Tuesday & Thursday 9:00 AM-11:00 AM

Class Location: DSCS 131

Office Hours: Tuesday 2:30 PM – 4:00 PM by appointment.

I will be available if an appointment is made via email, 24 hours in advance.

Welcome to **Fundamentals in Physics** !!! In this class, you will learn the basic concepts of physics. The root word of Physics comes from the ancient Greek word 'physis' which means 'nature'. In other words, physics is the general study of nature. It covers a broad range of interesting fields; from the most element particles to the vast galaxies, and we see its applications in our daily lives; from electricity to smart phones. Science and technology play an ever increasing role in our lives. Learning the basic concepts of physics will help you to understand the 'reasons' behind applications, think critically, analyze and make educated decisions. I hope you will enjoy this class and I'm looking forward to an exciting semester with all of you !!!

Remember, it is YOUR RESPONSIBILITY TO READ THE SYLLABUS

Course Description:

This course emphasizes the principles of physics; the use of mathematics is kept to a minimum. Topics include mechanics, properties of matter, heat, sound, electricity, magnetism, light, relativity, atomic and nuclear physics. The course is designed for students without the physics background needed for General Physics or other science courses.

Prerequisite: College reading, writing skills and math skills are required.

Co-requisite: PHY-1025L

Course Objectives: The student will be able to explain elementary concepts of and be able to work simple algebraic problems involving (as covered in the course):

1. Measurements and "Dimensions"
2. Linear and non - linear motion
3. Newton's laws of motion, momentum and impulse
4. Work, energy, power, efficiency
5. Rotational motion, centripetal force
6. Temperature, heat and related concepts of thermodynamics
7. Vibrations and waves (e.g. "sound", "light")
8. Electrostatics, electricity, and magnetism

Grading System: The Grading policy outlined in the current HCC Catalog will be followed. **Your final grade will be determined from the best two of the three in-semester Tests, homework and the Final (Cumulative).**

A: 90 – 100 B: 80 – 89 C: 70 – 79 D: 60 – 69 F: 59 or below

Final grade will be determined as follows:

In-class quizzes = 5%
Homework average = 15 %
Mid-semester Tests = 60 %
Final exam = 20 %

Assignments: Homework problems will be posted on Blackboard class web page (on PowerPoint class notes) and also will be given in class. Homework counts as 15 % of the final grade. The two lowest homework scores will be dropped. In-class quizzes counts as 5 % of the final grade. The two lowest quiz scores will be dropped.

Handing in Work: All homework problems, work sheets, tests and in-class quizzes should be turned in on paper. You **MUST** write your name and section number clearly on each paper and STAPLE everything together. You must always show your work clearly. I will not give points if only answers are submitted. If I cannot read your handwriting, you will not receive points. If your handwriting is illegible, please type your answers (must show all the work, and equations if required) and submit a printout.

If you have questions regarding graded homework assignments, you should contact me within 24 hours in person or via email. If you questions regarding graded tests, the time to raise them is on the same day the graded tests were returned.

Late or Missed Work: If you add this course during the initial drop-add period OR are a late add, it is your responsibility to communicate with the professor about work you missed. All catch-up work including homework (if any) must be completed no later than two weeks after your first class attendance. Failure to do this will result in permanent zeros for that work.

- A) Homework:** Homework due dates will be posted with assignments and/or will be announced in class. I will not accept late homework submissions unless they are because of properly documented excused absences.
- B) In-class quizzes:** If you are late to the class and miss a quiz or in class worksheet, **there will be NO makeup quizzes or worksheets.**
- C) Missed in-semester Tests:** **There will be NO makeup tests.** If you miss one test for any reason, remaining 2 tests and the final exam will make up your test average.
- D) Final Exam:** The final exam schedule is set by the college. The final exam must be taken at the scheduled time unless you have a documented, university approved excuse. Students who miss the final exam will be given an Incomplete. A makeup final will only be permitted for students who contact me before or within 24 hours of the scheduled exam date AND with **formal documentation** of a severe illness or family emergency. In such cases, the exam date and time will be determined by the instructor. In all other cases, the final grade will be based on points received, counting the final exam as zero.

During tests and final exam, students who are late will be allowed to take the test ONLY if no student has left the classroom.

Do not make plans to leave before the end of finals week.

Keep all your graded homework, lab reports, and tests in a folder.

Attendance Policy: Attendance is required (unless you are ill). Roll will be taken at the start of each class. It is your responsibility to sign the attendance sheet.

In addition, the attendance policy outlined in the current HCC Catalog will be followed. It is your responsibility to get notes, homework or any other assignments from a classmate if you miss a class.

No cellphones during classes !!! Turn off cellphones before the class/lab starts. I will deduct 5 points from your next test score each time you text or answer calls during the class/lab.

No food is allowed in the classroom.

Calculators **cannot be shared** on test/exam days. Phones cannot be used as calculators.

Communication Policy: Students are encouraged to express their ideas freely in the class or by email. However, students are expected to be polite and respectful to classmates and the instructor. I prefer email communication outside the class and office hours. Include your name and section number in the subject line. Please do not leave telephone messages.

Check your HCC email Blackboard course page daily for class announcements. Lecture outlines and other class material will be posted on Blackboard (MyHCC).

Notes & Tapes: A student shall not, without the faculty member's express authorization, make or receive any recording, including but not limited to audio and video recordings of any class, co-curricular meeting, organizational meeting or meeting with a faculty member. Further, the student does not have permission to post class lectures or course lectures on the web.

Academic Dishonesty Policy: Any student caught cheating on an exam or engaging in any other form of academic dishonesty will be given either a "0" grade on that exam or an "F" as the final course grade, at the discretion of the instructor.

Instructional Methods: The class will consist of a combination of lectures, demonstrations, multi-media presentations and exercises, and will be supplemented by the experiments done in the associated laboratory class (PHY-1025L)

Tutoring Center: The HCC Dale Mabry Campus Tutoring Center is an excellent learning resource that all students should take advantage of. The center offers trained tutors in most subject areas including physics, and math.

Request for Accommodations: If, to participate in this course, you require an accommodation due to a physical or learning impairment, you must contact the office of Student Services to Students with Disabilities. The office is located in the Student Services Building, room 204 or call (voice) 813-259-6035.

Request for a "W" Grade: The instructor will not award a "W" or approve a "W" after the deadline.

Request for an "I" Grade: An "I" grade will only be awarded in the event of an emergency or extenuating circumstances. To be eligible for an "I" grade more than 2/3 of the course must be completed with a passing grade. A student must arrange to receive an "I" grade before the Final.

How to do well in the course:

- Plan to study at least 2 hours outside the class, for every hour in class. If you have difficulty in reading, math, language you should plan to spend extra time.
- Read the relevant chapters in the text book before attending the class. This is important as in-class quizzes will be based on the sections previously covered.
- It is absolutely necessary to do homework problems. Though I encourage group discussions, you have to submit your own work. Take advantage of review sessions and office hours. I recommend that you try additional problems from the text book, in addition to the assigned homework problems.
- It takes time and practice to develop correct conceptual and analytical skills. Manage your time efficiently so that you have enough time for your studies.

Very Tentative Lecture Schedule PHY-1025

#	Tuesday		Thursday	
1	May 14	Introduction Ch 1: About Science	May 16	Ch2: Newton's 1 st Law of Motion Ch 3: Linear Motion
2	May 21	Ch 3: Linear Motion Ch 4: Newton's 2 nd Law of Motion	May 23	Test 1 (Ch 1,2,3)
3	May 28	Ch 4: Newton's 2 nd Law of Motion Ch 5: Newton's 3 rd Law of Motion	May 30	Ch 5: Newton's 3 rd Law of Motion Ch 6: Momentum
4	June 04	Ch 6: Momentum Ch 7: Energy	June 06	Test 2 (Ch 4,5,6,7)
5	June 11	Ch 8: Rotational Motion	June 13	Ch 8: Rotational Motion Ch 9: Gravity
6	June 18	Ch 10: Projectile & Satellite Motion	June 20	Ch 13: Liquids
7	June 25	Ch 15: Temperature, Heat, and Expansion	June 27	Test 3 (Ch 8,9,10,13)
8	July 02	Ch 17: Change of Phase	July 04	Independence Day – No Class
9	July 09	Ch 19: Vibrations & Waves Ch 20: Sound	July 11	Ch 23: Electric Current
10	July 16	Ch 24: Magnetism	July 18	Final Exam (Cumulative)

Chapter sequence is subject to change and any changes will be announced in class or via email.

Last Day to Drop with Refund: May 15, 2013

Last Day to Withdraw with W Grade: June 21, 2013

Canceled Class: If a class is canceled for any reason, the lesson scheduled for that day will be taught in the next class. In such a case, homework assignments also should be turned in the next class.