UNIVERSITY of HOUSTON

COLLEGE OF NATURAL SCIENCES & MATHEMATICS HTTP://NSM.UH.EDU

**COURSE TITLE/SECTION**: Physics 1301 Introductory General Physics I/Class Number 20459

**TIME: 11 am -12 pm MWF** **LOCATION:** Fleming 160

**FACULTY: Dr. Donna Stokes** **OFFICE HOURS**: 2-3 pm TTh and by appointment
SR#1 room 531-C

**E-mail: dstokes@uh.edu** **Phone: (713) 743- 3588** **FAX: (713) 743-3589**

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## I. Course: Physics 1301 - Introductory General Physics I

**A. Catalog Description:** Elementary principles of mechanics and heat.

**B. Prerequisites**: MATH 1330. Primarily for majors other than physics, mathematics, and engineering. Credit may not be applied toward a degree for both PHYS 1301 and University Physics I, PHYS 1321.

**II. Course Objectives:** The objective of this course is Learn the principles of mechanics through application of Newton's laws a.

Upon completion of this course, students will be able to:

1. comprehend the fundamental principles in mechanics.
2. use the formalisms of the theory and mathematical techniques to solve problems. This involves application, analysis, and synthesis of the fundamental principles.

Other learning outcomes include:

1. Students completing this course will be able to convey knowledge of the basics principles of physics and be able to use these principles to solve elementary problems.
2. Students will be able to take a real life problem and use physical principles and basic mathematical tools to describe the problem.
3. Student will have the ability to communicate orally and in writing in a clear concise manner the concepts of Physics.

**III. Course Content:** This course will cover chapter 1 – 15 which include the following topical areas:

1. Vector in Physics
2. Newtonian Mechanics: Motion in 1-D and 2-D
3. Work and Energy
4. Momentum and Collisions
5. Rotational Kinematics, Dynamics and Energy
6. Gravity
7. Oscillations about Equilibrium
8. Waves and Sound
9. Fluids

## IV. Course Structure:

The web address for the class is www.phys.uh.edu/~dwstokes.

## V. Textbooks

***Physics, Fourth Edition*, James S. Walker.** Binder version with access code to Mastering Physics and My Readiness Test available at the UH bookstore.

## VI. Course Requirements

**A.** **Reading quizzes** covering the material from the reading assignment, consisting of 2-3 questions/problems, will be assigned over Blackboard. The quizzes will be available at least 24 hours before they are due and they will be due by the beginning of the lecture time. There will be a time limit for taking the quiz and you will be allowed 2 attempts for each quiz. Solutions for the quizzes will be discussed during the lecture and will be posted on the class website.

B. **Homework Assignments**: (See Mastering Physics for HW assignments) 10 **homework** problems will be assigned at the beginning of each chapter and will be due approximately one week from that date. They will be graded on a scale of 0 to 5, where 5 points are given for a completely correct solution and 0 points for a totally incorrect solution. Late homework is only accepted with a valid excuse.

**Mastering Physics Class code: MPSTOKES56968**

**See Blackboard for details on how to register and access the online homework through Mastering Physics**.

**C.** **Exams:** There will be one **diagnostic exam**, three **regular exams** and a **final exam** for a total of five exams for the class.

The **required diagnostic exam** consists of 20 multiple choice questions covering basic mathematical skills in algebra, geometry, trigonometry and word problem solving. The exam will be administered by CASA Testing Center **July 30th – August 2nd and August 27th – September 6th**. No calculators are allowed. If you score 50% or below on this exam, you must show proof of having completed the prerequisite, precalculus, MATH 1330, for this course to me or you may e-mail your transcript from your MyUH account to dstokes@uh.edu by **5 pm** on **September 7, 2012**. **Please include your Physics instructor's name, course name and class number in the subject line of your e-mail, i.e., Professor Stokes, Phys 1301, Class number 20459.** If you have not completed the prerequisite, you may be dropped from the course and any labs associated with this course by your instructor. You can log onto the CASA website to make a reservation at http://casa.uh.edu or you may go to room 222 Garrison Gym. You will be able to reserve a spot to take the exam approximately one week before the exam opens.

T**he diagnostic exam is worth 3% of your final grade. If you score above 70%, you should be well prepared to pass the course, 51 - 70%, you should review algebra, trigonometry and calculus, 50% and below, you should consider dropping the course or re-enrolling once you have improved your math and problem solving skills.**

**If you score below 65% on the diagnostic exam, you can take a math tutorial to increase your diagnostic exam score to 65% but no greater. You must complete all tutorial sub-test as well as the final test with a score of 80% or greater. The Department of Physics has set up the math tutorial course through My Readiness Test, an online math tutorial offered by the publisher of the textbook for the course. If you purchased a textbook from the UH Bookstore, you will receive a free access code to My ReadinessTest. If you did not purchase your textbook through the UH bookstore, you can purchase a code for My Readiness test for $15 through the publisher's website listed below.**

**http://www.myreadinesstest.com/support/mpt/contactus_stu.htm**

**Statistics: A study on 543 student enrolled in Phys 1301 at UH, showed that of the students who scored below 65% on the diagnostic exam, 78% of those completing the math tutorial passed the course while only 45% of those who did not complete the math tutorial passed the course. These statistics show that it is to your advantage to complete the math tutorial to increase your chances of passing the course.**

**See Blackboard or the class website for details on how to register and access the math tutorial through My Readiness Test.**

The **regular exams** will be given during the scheduled examination period for this course which is on Fridays from 5:30 – 7:00 pm (see note on the course listing and exam schedule on next page). The regular exams will cover 2-4 chapters and will consist of 10-15 multiple choice problems. Each regular exam will be worth 17 % of your final grade for a total of 51% for the three regular exams.

The **final exam** will be comprehensive covering all chapters covered for the course. The format of the final exam will be similar to that of a regular exam. This exam will be given during the University Departmental final exam scheduled time.

There are no makeup exams for this course. The lowest exam score will be replaced by the final exam score if the final exam score is higher.

**D.** **Extra Credit:** Extra credit points will be given via questions answered during lecture using the personal remote system. Each clicker costs $40 plus tax. For the detailed Clicker purchasing information, please contact

Barnes & Noble in the UC
4800 Calhoun Rd.
126 University Center
Houston, TX 77204
Phone: 713-748-0923

**NOTE:** You can use your book loan to buy a clicker through the bookstore. Clickers are not mandatory. **See Blackboard or class website for clicker registration instructions.**

Fall 2012 Course Schedule MWF

| | Chapter | Notes |
|---|---|---|
| 27-Aug-12 | 1 | |
| 29-Aug-12 | 1 & 2 | |
| 31-Aug-12 | 2 | |
| 3-Sep-12 | Labor Day | |
| 5-Sep-12 | 2 | |
| 7-Sep-12 | 3 | |
| 10-Sep-12 | 3 | |
| 12-Sep-12 | 3&4 | *Sep. 12 - Last Day to Drop Without a W* |
| 14-Sep-12 | 4 | |
| 17-Sep-12 | 4 | |
| 19-Sep-12 | 4 | |
| 21-Sep-12 | 5 | |
| 24-Sep-12 | 5 | |
| 26-Sep-12 | 5 | |
| 28-Sep-12 | 6 | |
| 1-Oct-12 | 6 | |
| 3-Oct-12 | 6 | |
| 5-Oct-12 | 7 | **Exam 1, Ch. 1 - 5, Friday 5:30 - 7pm** |
| 8-Oct-12 | 7 | |
| 10-Oct-12 | 7 | |
| 12-Oct-12 | 7 | |
| 15-Oct-12 | 8 | |
| 17-Oct-12 | 8 | |
| 19-Oct-12 | 8 | |
| 22-Oct-12 | 9 | |
| 24-Oct-12 | 9 | |
| 26-Oct-12 | 9 | |
| 29-Oct-12 | 10 | |
| 31-Oct-12 | 10 | |
| 2-Nov-12 | 10 | **Exam 2, Ch. 6-9, Friday 5:30 - 7pm**<br>*Nov. 2 - Last Day to Drop with a W* |
| 5-Nov-12 | 11 | |
| 7-Nov-12 | 11 | |
| 9-Nov-12 | 11 | |
| 12-Nov-12 | 12 | |
| 14-Nov-12 | 12& 13 | |
| 16-Nov-12 | 13 | |
| 19-Nov-12 | 13 | |
| 21- 23 Nov-12 | Thanksgiving | |
| 26-Nov-12 | 14 | |
| 28-Nov-12 | 14 | |
| 30-Nov-12 | 14 | |
| 3-Dec-12 | 15 | |

Syllabus last modified on 8-27-12

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|---|---|---|
| 5-Dec-12 | 15 | |
| 7-Dec-12 | 15 | **Exam 3, Ch. 10-14, Friday 5:30 - 7pm** |
| 15-Dec-12 | Saturday | **Final, Ch. 1 – 15, Saturday 8-11 am** |

## VII. Evaluation and Grading

**3% Diagnostic Exam**
**11% Reading Quizzes**
**10% Homework**
**17% Regular Exam I**
**17% Regular Exam II**
**17% Regular Exam III**
**25% Final Exam (Saturday, December 15, 2012, 8 – 11 am, location)**

**Policy on grades of I (Incomplete**): The grade of "I" (Incomplete) is a conditional and temporary grade given when a student, for reasons beyond his or her control, has not completed a relatively small portion of all requirements. Sufficiently serious, documented situations include illness, death in the family, etc.

## VIII. Consultation

My office is located in 531-C of Science and Research #1. My mailbox is located in the Physic office, room 617 in Science and Research # 1. My office hours will be from 2-3 pm TTh. If you can not see me during those times, you may schedule an appointment with me by calling me at (713) 743-3588 or e-mailing me at dstokes@uh.edu.

## IX. Bibliography

References: Physics, Algebra/Trig, Eugene Hecht; Fundamentals of Physics, Halliday, Resnick, and Walker; The Feynman Lectures on Physics, R. Feynman, R.B. Leighton, and M. Sands

**Addendum:** Whenever possible, and in accordance with 504/ADA guidelines, the University of Houston will attempt to provide reasonable academic accommodations to students who request and require them. Please call 713-743-5400 for more assistance.

It is each student's responsibility to read and understand the Academic Honesty Policy found in the Student Handbook, which can be found at http://www.uh.edu/dos/hdbk/acad/achonpol.html.

**Academic Dishonesty:** Please see following website for information regarding academic dishonesty. www.uh.edu/honpol.

**Religious Holy Days:** Students whose religious beliefs prohibit class attendance or the completion of specific assignments on designated dates may obtain an excused absence. To do so, please make a written request for an excused absence and submit it to your instructor as soon as possible, to allow the instructor to make arrangements. For more information, see the Student Handbook.
http://www.uh.edu/dos/publications/handbook.php

**Standard Disclaimer:** This syllabus is subject to change at the discretion of the instructor.

Syllabus last modified on 8-27-12