UNIVERSITY of HOUSTON

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

COURSE TITLE/SECTION: Physics 1301 Introductory General Physics I/Class Number 15066

TIME: 12 - 1 pm MWF **LOCATION:** SR #1 Rm. 116

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

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

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.uh.edu/~dwstokes.

V. Textbooks

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

VI. Course Requirements

A. **Warm up Assignments: 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. **Written Assignments**: (See Mastering Physics for HW assignments) 3-10 **homework** problems will be assigned at the beginning of each chapter and will be due approximately one week from that date. All problems will be submitted **on-line through Mastering Physics**. 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: MPSTOKES55813

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 diagnostic exam will test your basic mathematical skills in algebra, geometry, trigonometry and word problem solving. The required diagnostic exam for this course will be administered by CASA Testing Center **January 18-26th.** 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 Peoplesoft account to dstokes@uh.edu by **5 pm on January 28, 2011**. Please include your instructor's name, course name and class number in the subject line of your e-mail, i.e., Professor's Name, Phys 1301, Class number 15066). 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.

The 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.

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 2-5 chapters and will consist of 15-25 multiple choice questions. Each regular exam will be worth 14 % of your final grade for a total of 42% for the three regular exams.

The **Departmental 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 scheduled time for Departmental exams. It will be worth 25% of your final grade.

NOTE: No makeup exams will be given. The lowest examination or missed examination grade will be replaced by the final examination grade if such action improves your grade.

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 for clicker registration instructions.**
Spring 2011 Course Schedule

	Chapter	Comments
19-Jan-11	1	
21-Jan-11	1 &2	
24-Jan-11	2	
26-Jan-11	2	
28-Jan-11	3	
31-Jan-11	3	
2-Feb-11	3 & 4	*Feb. 2 - Last Day to Drop Without a W*
4-Feb-11	4	
7-Feb-11	4	
9-Feb-11	4	
11-Feb-11	5	
14-Feb-11	5	
16-Feb-11	5	
18-Feb-11	6	
21-Feb-11	6	
23-Feb-11	6	
25-Feb-11	7	
25-Feb-11	**Exam 1, Friday 5:30 - 7pm**	**Covering chapters 1-5**
28-Feb-11	**7**	
2-Mar-11	7	
4-Mar-11	8	
7-Mar-11	8	
9-Mar-11	8	
11-Mar-11	9	
14-19-Mar-11	Spring Holiday	
21-Mar-11	9	
23-Mar-11	9	
25-Mar-11	9	
28-Mar-11	10	
30-Mar-11	10	
1-Apr-11	10	

1-Apr-11	**Exam 2, Friday 5:30 - 7pm**	**Covering chapters 6-9**
4-Apr-11	11	*April 5- Last Day to Drop with a W*
6-Apr-11	11	
8-Apr-11	11&12	
11-Apr-11	12	
13-Apr-11	13	
15-Apr-11	13	
18-Apr-11	13	
20-Apr-11	14	
22-Apr-11	14	
25-Apr-11	14	
27-Apr-11	15	
29-Apr-11	15	
29-Apr-11	**Exam 3, Friday 5:30 - 7pm**	**Covering chapters 10-14**
2-May-11	15	
7-May-11	**Departmental Final Exam 8-11 am**	**Covering chapters 1-15**

VII. Evaluation and Grading

3% Diagnostic Exam
10% Reading Quizzes
20% Homework
14% Regular Exam I
14% Regular Exam II
14% Regular Exam III
25% Final Exam (Saturday, May 7th, 8 – 11 am, Location: TBA)

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 room 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 on 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.

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