

Instructor: Dr. Fukai **Office:** AL 213 (Physics Bldg)
Class: 8:00 – 8:50 M W F PKH 236 (Office hr; 2:30-4:00 M, T and by app.)

Laboratory: Monday
Recitation: Wednesday

Text/material: *Physics, Vol .I* (Fifth ed) by Halliday, Resnick, and Krane, and Lab manual.

PHYS 1607 is the first of a two-course sequence entitled the Honors Physics course that introduces fundamental issues in calculus and physics in a cohesive fashion and is recommended for members of the Honors College and physics majors. The subject matter in PHYS 1607 involves basically mechanics and thermal physics using calculus. The lecture is slightly more advanced level than the standard course represented by the PHYS1600 series. The main difference lies in the extensive use of calculus to describe physical phenomena. But, the enhancements in honors courses are meant to be qualitative rather than quantitative – more focused on a deeper exploration of the subject matter than on simply adding more work. The materials covered include: Newton's laws, conservation of momentum, energy, and angular momentum, rotational dynamics, gravitation, fluids, oscillations, waves, special relativity and thermal physics.

Lecture schedule:

Week (Recitation)	Mon 8/16	Wed _ _ _	Fri Ch. 2	Test Schedule Ch. 2
8/21	Ch. 3	Ch. 4	Ch. 4	
8/28	Ch. 5	Ch. 5	Ch. 5	
9/04	_ _ _	Ch. 6	Ch. 6	<u>Test 1</u> (09/06 W)
9/11	Ch. 7	Ch. 7	Ch. 8	

9/18	Ch. 9	Ch. 9	Ch. 10	
9/25	Ch. 11	Ch. 11	Ch. 12	
10/01	Ch. 12	Ch. 13	Ch. 13	
10/09	Ch. 14	Ch. 15	Ch. 15	<u>Test 2</u> (10/11 W)
10/16	Ch. 16	Ch. 16	Ch. 17	
10/23	Ch. 17	Ch. 18	Ch. 18	
10/30	Ch. 19	Ch. 20	Ch. 20	<u>Test 3</u> (11/01 W)
11/06	Ch. 20	Ch. 21	Ch. 21	
11/13	Ch. 22	Ch. 22	- - -	
11/20	- - - - Thanksgiving Recess - - - -			
11/27	Ch. 23	Ch. 23	Ch. 24	
12/04	Ch. 24	Review		<u>Test 4</u> (12/04 M-No Lab)

Test 1 covers Chapters 2 – 5: Kinematics and Newton’s laws

Test 2 covers Chapters 6 – 14: Linear momentum/angular momentum and Energy/Gravitation

Test 3 covers Chapters 15– 19: Fluids and Oscillations and Waves/Sound

Test 4 covers Chapters 20 – 24: Special relativity and Thermal physics

Final Exam (comprehensive): **12/13(SAT): 11:00 am – 1:30 pm**

Tests: There will be four (4) Tests scheduled as shown in the previous page. The tests will be given during the designated recitation sessions. The tests are closed book, and no note cards are allowed. Also, no formula sheets, but hand calculators are allowed. *My advice* Do not miss any test - - - you do not want to take a makeup test.

Homework: Homework will be assigned for each chapter. It will consist of several

exercises and problems chosen from the text. You are not required to hand in your work, but during each recitation session you will be asked to work out a question or so that are the same or similar to the assigned homework.

Grading: I anticipate using the following grading scale. Class participation will be a relevant factor in determining the final grade for those cases that fall on the borderline between grade ranges.

Grading scale:

4 test average	50%	A: 88 – 100
Final	25%	B: 76 – 87.9
Lab/Rec(15/10)	25%	C: 64 – 75.9
		D: 52 – 63.9
		F: below 52

Course Policy: The student is responsible for all materials covered and information given in lectures. **No make-up test** will be given without an official document for excuse.

Absence: Please inform me in advance of any excused absence on the day an exam is given.

Laboratory/Recitation course (PHYS 1608): The laboratory/recitation work is an integral part of the course. Satisfactory completion of lab/rec work is mandatory. Lab experiments are selected to parallel and complement the topics covered in the lectures. Recitation is to enhance students' problem-solving skills and to help students for better understanding of the materials.

Modifications: The instructor reserves the right to make reasonable changes to the course in the event a situation arises which warrants a change. Such changes will be made known to the class when they occur.