PHYS 103: College Physics **Syllabus** **Fall 2015**

Instructor: Prof. Hui Zhang
Office: 708D Elvey Building; Tel: (907)474-5914; E-mail: hzhang14@alaska.edu
Reichardt 108 (during office hours)

Time: Lectures: Mondays, Wednesdays, and Fridays, 9:15am-10:15am

Place: Lectures: REIC 201; Labs: REIC 258

Office Hours: Mondays, Wednesdays, and Fridays 10:15am-11:15am, or by appointment. Additionally, a help room (REIC 122) will be staffed at various times (the schedule is posted on REIC 122 door) to answer homework related questions.

Credits: 4 credits, 3 hours/week of lecture and 3 hours/week of lab

Required Text Book and Material:

Physics: Principles with Applications, Douglas C. Giancoli, 7th Edition, 2013, ISBN 9780321625922

MyLab & Mastering access (www.pearsonmylabandmastering.com)
(Course ID: zhang55095)

Course Description

Physics 103 offers an overview of basic physics. We will begin with a review of the basic language of physics including measurement and how to describe motion. We will then introduce Newton's 3 laws of motion and two important concepts, energy and momentum. We will then move on to fluid mechanics and waves (including sound wave). Finally we will learn thermodynamics, including temperature, heat, and laws of thermodynamics.

Grading

Attendance and In-class Exercise	10%
Homework Assignments (one every week)	10%
Quizzes (closed book)	10%
Two Mid-term Exams (closed book)	30%
Cumulative Final Exam (8-10am on December 18, Friday, closed book)	25%
Labs	15%
Total	100%

> 97 %	A+
93 % -- 97 %	A
90 % -- 93 %	A-
87 % -- 90 %	B+
83 % -- 87 %	B
80 % -- 83 %	B-
77 % -- 80 %	C+
73 % -- 77 %	C
70 % -- 73 %	C-
67 % -- 70 %	D+
63 % -- 67 %	D
60 % -- 63 %	D-
< 60 %	F

Course Policies

- Homework assignments will be given online (http://www.pearsonmylabandmastering.com). Go to the website, login as a student and follow the instructions. The **course ID is zhang55095** and the course title is PHYS 103 College Physics. Make sure the name you give the website matches your name of record. You will be allowed to 5 attempts per question. Each homework problem has randomly generated input values so each student will have a unique answer. Make sure that you use your own input values when solving each problem. Handwritten homework will NOT be accepted. Late homework submissions will NOT be accepted.

- NO MAKE-UP QUIZZES OR EXAMS WILL BE GIVEN.

  If the student must miss a quiz or an exam, under rare circumstances where the student has a legitimate reason, the student must notify the instructor that the exam will be missed and present written verifiable proof of the reason for missing the exam, e.g., a doctors note, police report, court notice, etc., clearly stating the date AND time of the mitigating problem. If these conditions are met, the score on the comprehensive final exam will be substituted for the quiz or exam the student missed. Otherwise, a zero score will be assigned for the missed quiz or exam. In the event the Final Exam is not taken, under rare circumstances where the student has a legitimate reason for missing the final exam, a makeup exam will be administered.

- Labs: A PASSING GRADE IN THE LAB IS NECESSARY TO PASS THE COURSE.

  There is a lab associated with this course. ALL labs and reports must be completed to get a passing grade for the lab. Please plan on attending all lab sessions; missing lab is strongly discouraged. Please contact the Lab Supervisor or your TA immediately if you intend to be or have been absent. If your absence is not documented you will not be allowed a make-up lab. *Missed labs that are not made up result in an automatic failing grade of both the laboratory and the course.* Make-up labs are offered November 23th-25th. Questions about the lab should be directed to your TA.

- High ethical standards are essential for maintaining credibility. Plagiarism is defined as appropriating passages or ideas from another person's work and using them as one's own. You may work with your classmates on homework assignments, however, you should submit your own work, not a copy from another source. Keep in mind that you will be required to do similar problems on your own during an exam. Plagiarism on homework or on an exam will result in a failing grade.

Students with Disabilities Notice

The University of Alaska Fairbanks is committed to equal opportunity for students with disabilities. Students with disabilities are encouraged to contact the coordinator of Disability Services (Mary Matthews) at the Center for health & Counseling (x7043). See section on "Disability Services" of the UAF Class Schedule (http://www.uaf.edu/schedule/).

Tentative Weekly Schedule

Week	Date	Lecture Subject	Homework
1	F Sep 4	Syllabus/Introduction to Physics (Ch1: sec 1-4)	
2	M Sep 7	**Labor Day (no classes)**	
	W Sep 9	Units, significant figures (Ch1: sec 4-7)	Homework 1
	F Sep 11	1-D motion (Ch2: sec 1-4)	
3	M Sep 14	Motion at Constant Acceleration (Ch2: sec 5-7)	
	W Sep 16	Vectors and Scalars (Ch3: sec 1-4)	Homework 1 is Due
	F Sep 18	Projectile Motion (Ch3: sec 5-7)	
4	M Sep 21	Force, Newton's Laws of Motion (Ch4: sec 1-4)	
	W Sep 23	Newton's Laws of Motion Cont. (Ch4: sec 5-6)	Homework 2 is Due
	F Sep 25	(Ch4: sec 7-8)	
5	M Sep 28	Circular Motion (Ch5: sec 1-3)	
	W Sep 30	Gravitation (Ch5: sec 5-7)	Homework 3 is Due
	F Oct 2	(Ch5: sec 8-10)	
6	M Oct 5	Work and Energy (Ch6: sec 1-5)	
	W Oct 7	(Ch6: sec 6-10)	
	F Oct 9	Mid-term Exam 1	
7	M Oct 12	Linear Momentum (Ch7: sec 1-4)	
	W Oct 14	(Ch7: sec 5-6)	Homework 4 is Due
	F Oct 16	(Ch7: sec 7-8)	
8	M Oct 19	Rotational Motion (Ch8: sec 1-4)	
	W Oct 21	(Ch8: sec 5-8)	Homework 5 is Due
	F Oct 23	Static Equilibrium (Ch9: sec 1-4)	
9	M Oct 26	(Ch9: sec 5-6)	
	W Oct 28	Fluid Mechanics (Ch10: sec 1-5)	Homework 6 is Due
	F Oct 30	(Ch10: sec 6-10)	
10	M Nov 2	Oscillations (Ch11: sec 1-4)	
	W Nov 4	Waves (Ch11: sec 5-6)	Homework 7 is Due
	F Nov 6	(Ch11: sec 7-13)	
11	M Nov 9	Sound (Ch12: sec 1-4)	
	W Nov 11	(Ch12: sec 6-7)	
	F Nov 13	Mid-term Exam 2	
12	M Nov 16	Temperature (Ch13: sec 1-4)	
	W Nov 18	The Gas Laws (Ch13: sec 5-8)	Homework 8 is Due
	F Nov 20	Kinetic Theory (Ch13: sec 9-12)	
13	M Nov 23	Heat (Ch14: sec 1-4)	
	W Nov 25	(Ch14: sec 5-8)	Homework 9 is Due
	F Nov 27	**Thanksgiving Holidays (no classes)**	
14	M Nov 30	Laws of Thermodynamics (Ch15: sec 1-3)	
	W Dec 2	(Ch15: sec 4-5)	
	F Dec 4	(Ch15: sec 6-7)	Homework 10 is Due
15	M Dec 7	(Ch15: sec 8-9)	
	W Dec 9	(Ch15: sec 10-11)	
	F Dec 11	Review	Homework 11 is Due
16	M Dec 14	Review	
	F Dec 18	8-10am, Final Exam	