Phys 123X: College Physics I Syllabus

Fall 2022

Instructor Information

Instructor	Email	Office Location & Hours
Wang Xu (Caleb)	wxu3@alaska.edu	REIC 110,TBD

General Information

Course Description

Physics 123 is a four-credit course. It offers an overview of basic physics. We will begin with the basic language of physics, including how to record measurements and how to describe motion. Then we will learn Newton's three laws of motion and two important concepts: energy and momentum, etc. We will then move on to fluid mechanics and waves (including sound waves). Finally, we will end with temperature, heat, and the laws of thermodynamics.

Lecture Schedule

Lectures: REIC 201/Mondays, Wednesdays, and Fridays, 9:15 am - 10:15 am

Required Text

Physics: Principles with Applications, Douglas C. Giancoli, 7th Edition, ©2014 |Pearson ISBN 9780321625922

Grading Policy

Homework	Attendance	Lab	Quiz	Midterm 1	Midterm 2	Final	Total
20%	5%	10%	15%	15%	15%	20%	100%

Your final grade for this course will be based on a curve. The average of the curve will be the breakpoint between letter grade B- and C+. The standard deviation of the grade point distribution will separate subsequent letter grades.

Lecture Schedule

Week	Topic	Reading	Dates	HWK Due Date
Week 1	Introduction, Measurement, Estimation	Ch1:1-4, 4-8*, Quiz 1	08/29,08/31,*09/02*	09/09
Week 2	One Dimension Kinematics	Holiday, Ch2:1-4, 5-8	~~09/05~~,09/07,*09/09*	09/16
Week 3	Two Dimension Kinematics	Ch3:1-5, 5-8, Quiz 2	09/12,09/14,*09/16*	09/23

Week	Topic	Reading	Dates	HWK Due Date
Week 4	Newton's Laws	Ch4:1-4, 5-8, **Mid-term 1**	09/19,09/21,*09/23*	09/30
Week 5	Circular Motion & Gravitation	Ch5:1-6, 6-10, Quiz 3	09/26,09/28,*09/30*	10/07
Week 6	Work & Energy	Ch6:1-5, 5-10, Quiz 4	10/03,10/05,*10/07*	10/14
Week 7	Linear Momentum	Ch7:1-4, 5-10, Quiz 5	10/10,10/12,*10/14*	10/21
Week 8	Rotational Motion	Ch8:1-5, 5-9, Quiz 6	10/17,10/19,*10/21*	10/28
Week 9	Static Equilibrium	Ch9:1-4, 4-7, **Mid-term 2**	10/24,10/26,*10/28*	11/04
Week 10	Fluids	Ch10:1-8, 8-14, Quiz 7	10/31,11/02,*11/04*	11/11
Week 11	Oscillations & Waves	Ch11:1-8, 8-15, Quiz 8	11/07,11/09,*11/11*	11/18
Week 12	Sound	Ch12:1-5, 5-9, Quiz 9	11/14,11/16,*11/18*	11/28
Week 13	Temperature & Kinetic Theory	Ch13:1-7, Holiday, Holiday	11/21,~~11/23,11/25~~	12/02
Week 14	Heat	Ch13:7-13, Ch14:1-8, Quiz 10	*11/28*,11/30,*12/02*	12/09
Week 15	The Laws of Thermodynamics	Ch15:1-6, 6-11: Quiz 11	12/05,12/07,*12/09*	12/16*
Week 16	Reviews	**Final** , -----, -----	*12/12*, ~~12/14,12/16~~	

Exam Schedule

Date	Subject
09/23	Mid-term 1
10/28	Mid-term 2
12/12(TBD)	Final Exam

Additional Requirements & Policy

Homework:

On average, 8-12 problems will be assigned each week on **Friday**. The homework will be due by 9:15 am the following **Friday** and you need to submit it on the canvas. **NO LATE HOMEWORK WILL BE ACCEPTED. NO EXCEPTIONS** (barring emergencies and extreme situations). Group work is encouraged to solve problems. Students are welcome to consult the instructor during office hours or by appointment for additional help with homework. All homework you submit should reflect your own work. Copying of homework is absolutely not acceptable and will result in a grade of ZERO for the assignment.

Quizzes:

11 short quizzes will be given in class during the semester. They will be open-book quizzes, and calculators will be allowed. The quiz material given will be similar to the recent homework or topics covered in class. All necessary formulas will be provided.

Exams:

There will be two midterms and a final comprehensive exam. The first midterm will test the material covered in the first four weeks, and the second test will cover the material in weeks 5-8. The final will include material covered from the beginning of the semester, with more weight on the material covered after the second midterm (weeks 9-15). **NO MAKEUP QUIZZES OR EXAMS WILL BE GIVEN.** If the student must miss a quiz or an exam, and the student has a legitimate reason, prior to the exam, the student must notify the instructor that the exam will be missed. The student must present written verifiable proof of the reason for missing the exam, e.g., a doctor's 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 given 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.

Laboratory:

The laboratory is an integral part of this course, and each student must register for and attend the lab section. All labs and reports must be completed on time. Every effort must be made to make up a lab during the same week, if possible. The last week of the semester will be set aside for makeup labs. **ALL LABS MUST BE COMPLETED IN ORDER TO PASS THIS COURSE.** Questions about the lab should be directed to your TA.

Student Code of Conduct:

You are expected to submit work that is your own and properly acknowledge the work of others. You are responsible for understanding and adhering to the Student Code of Conduct that is printed in the UAF Course Catalog. Violations of the Code will be reported to the Dean of Students.

Disabilities Services:

If applicable, it is your responsibility to arrange for these services. The UAF Center for Health and Counseling provides services for UAF students with disabilities to ensure equal access to educational opportunities. The Center's Disability Services Program ensures compliance with §504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. If you believe you are eligible for 504 and/or ADA accommodations, please contact them at 474-7043 (WHIT 203).