

Phys 123X: College Physics I Syllabus

Fall 2024

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 a few 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 grades 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 | 08/26,08/28, <u>08/30</u> | 09/06 |
| Week 2 | One Dimension Kinematics | Holiday, Ch2:1-4, 5-8 | 09/02 ,09/04, <u>09/06</u> | 09/13 |
| Week 3 | Two Dimension Kinematics | Ch3:1-5, 5-8, Quiz 2 | 09/09,09/11, <u>09/13</u> | 09/20 |

| Week | Topic | Reading | Dates | HWK Due Date |
|--------|-------------------------------|--------------------------|---------------------------|--------------|
| Week 4 | Newton's Laws | Ch4:1-4, 5-8, Mid-term 1 | 09/16,09/18, <u>09/20</u> | 09/27 |
| Week 5 | Circular Motion & Gravitation | Ch5:1-6, 6-10, Quiz 3 | 09/23,09/25, <u>09/27</u> | 10/04 |
| Week 6 | Work & Energy | Ch6:1-5, 5-10, Quiz 4 | 09/30,10/02, <u>10/04</u> | 10/11 |
| Week 7 | Linear Momentum | Ch7:1-4, 5-10, Quiz 5 | 10/07,10/09, <u>10/11</u> | 10/18 |
| Week 8 | Rotational Motion | Ch8:1-5, 5-9, Quiz 6 | 10/14,10/16, <u>10/18</u> | 10/25 |
| Week 9 | Static Equilibrium | Ch9:1-4, 4-7, Mid-term 2 | 10/21,10/23, <u>10/25</u> | 11/01 |

