

Instructor Peter Ho

CRN# 22424

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Section 05Z

Lecture Monday and Wednesdays from 5:30 PM to 7:20 PM

Location ONLINE - Zoom link is provided on Canvas.

Office Hours:

Monday and Wednesdays from 4:30 PM to 5:30 PM

Textbook

The textbooks we will be using will be used primarily as references, but not a necessary component or required for the course. We will be referencing the following texts in no particular order:

1. OpenStax: *College Physics*, is free to access online!
Link to textbook: <https://openstax.org/details/books/college-physics-2e>
2. Fundamentals of Physics by Halliday and Resnick (any edition)
3. Physics for Scientists and Engineers by Serway and Jewett (any edition)

The primary required reading will be assigned from OpenStax. However, all sources are equally important and a component to solving problems in assignments. There are free versions to download online.

Required Materials

A scientific calculator and a computer with internet access is necessary.

Prerequisites

The prerequisite for this course is the completion of the Math: *Pre-Calculus* series and Physics 10: Concepts in Physics.

Course Description and Objectives

In this course, we will work with concepts in the development of mechanics from physics. The objective of this course is develop and solve problems through critical thinking and analyzing real world problems. More specifically, working with concepts involving kinematics, force, momentum, energy, and rotation.

On Student Commitment

Learning physics especially at the college level is a rewarding but demanding experience. It is demanding for its abstract principles and use of mathematics to make logical conclusions. In short, to full comprehend physics requires the input of time and effort. Maintaining an understanding of the material is necessary to succeed. A recommendation is to commit at least double the amount in class time outside of the classroom to complete assignments and understand the ideas fully. In addition, we do exercise some level of abstraction, and the ability to connect physics concepts to mathematical formulation is a necessary component. Solving problems through the means of linear expressions, and through means of calculus are applied throughout the course.

Grading Criteria

The lecture will consist of a midterm, a final, weekly quizzes, and weekly homework assignments each with their designated grade points. The assignment point distribution is as follows:

Assignment	Point Distribution	Weight
Homework $\times 10$	250 points total \Leftrightarrow 25 points each	40%
Quizzes $\times 9$	270 points total \Leftrightarrow 30 points each	44%
Midterm	50 points	8%
Final	50 points	8%
Course Total	620 points	100%

NOTE: This course will not be graded on a curved scale. Therefore, the grade distribution follows the standard grading scheme, meaning that A+: 96-100%, A: 93-96%, A-: 90-93%, etc.

Exams

There will be two exams for the quarter, which are the midterm and final. Exam coverage comes for all previous homework and quiz topics leading up to the exam (i.e. material will be cumulative).

Quizzes

There are a total of 9 quizzes to be given on **Wednesdays at the end of lecture**. Quizzes are graded out of 30 points covering topics from homework and lecture topics of the week.

Homework

Homework will be assigned at the start of each week to be **due the following Monday at 5:30 PM**. No late assignments are accepted and a zero will be given for missing work.

Classroom Participation

While there is no required attendance for class, being present in class lecture is a large proponent to the learning physics. Please be present as much as possible to gain some classroom participation. This is to say, participation lends to bonus extra credit when determining final grades. Ultimately, the contribution to class discussion would only be toward the student's benefit.

Tentative Class Schedule

The general agenda for the class goes as listed on a weekly basis. Please keep in mind that this is tentative and is subject to change throughout the quarter.

Week	Topic	Assignments	Assessment
Sept 25 / Sept 27	Review of Math	HW #1	Quiz 1
Oct 2 / Oct 4	Intro to Vectors	HW #2	Quiz 2
Oct 9 / Oct 11	1D Kinematics	HW #3	Quiz 3
Oct 16 / Oct 18	2D Kinematics	HW #4	Quiz 4
Oct 23 / Oct 25	Force	HW #5	Quiz 5
Oct 30 / Nov 1	Newton's Laws	HW #6	Midterm
Nov 6 / Nov 8	Work-Energy Theorem	HW #7	Quiz 6
Nov 13 / Nov 15	Conservation of Energy	HW #8	Quiz 7
Nov 20 / Nov 22	Linear Momentum	HW #9	Quiz 8
Nov 27 / Nov 29	Rotational Dynamics	HW #10	Quiz 9
Dec 4 / Dec 6	Gravitation	Extra Credit	None
December 11th	Monday	6:15 PM - 8:15 PM	Final Exam

Finally, in fairness to all students in the class, the grading policy is to be in agreement to terms below:

1. Emails regarding final grade will be ignored after the final – there will be no response to emails.
 2. NO assignments including extra credit will be accepted after the final exam.
 3. Course grades are posted as accurate and up-to-date on Canvas; we follow the standard grading scheme.
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Student Learning Outcome(s):

- Examine critically new, previously un-encountered problems, analyzing and evaluating their constituent parts, to construct and explain a logical solution utilizing, and based upon, the fundamental laws of mechanics.

Office Hours:

M,W 4:30 PM 5:30 PM Zoom Email,By Appointment