

# Physics 180

## Yale University

### Summer 2024

## Welcome to Physics 180

**Physics 180: Fundamentals of Physics**

**Instructor : Dr. Mehdi Ghiassi-Nejad**

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- **Meets:** Mondays, Tuesdays, Thursdays and Fridays(9:30-10:45 am)
- **Discussion Sessions:** Tuesdays and Thursdays (11:00 am-12:00 pm)
- **Office Hours** Mondays and Fridays (2:00-4:00 pm)

*All sessions will be online and live*

**Textbook :** *Halliday and Resnick, Fundamentals of Physics, 10<sup>th</sup> edition Chapters 1-15*

## Course Description

This is a very fast pace one-semester course, which gives an overview of Vectors, Kinematics, Dynamics, Energy, Linear and Angular momentum, Gravitation, Oscillation and Wave Mechanics.

## Communication

I will use the email system built into Canvas as the official form of communication for this class. All information, changes to the schedule and other notices will be sent by means of Canvas's email. You can email me by means of Canvas or regular email.

## Pre and Co-requisites

Calculus at the level of Math 115 or equivalent is a prerequisite for Phys. 180.

## Goals of the course

The goal of Physics 180 is to provide a very good knowledge in physics in such a way that students are ready to continue in science, engineering majors and medical schools. It also provides strong foundation for students to think like a physicist.

## Course requirements and student evaluation

- **A.** Students must attend all lectures and discussion sections. Part of the grade is participation in the lectures.
- **B.** Engagement in the class is very important.
- **C.** Students should be prepared to discuss assigned readings and homework problems.
- **D.** Homework problems will be assigned (see homework section). Assignments and solutions will be posted on Canvas. No late homework will be accepted.
- **E.** There will be three test.

## Student Evaluation

- Class participation **5%**
- participation in discussions. **5%**
- Homework Assignments. **25%**
- Exams **65%**

## Important dates

<b>Test 1</b>	06/03/2024	<b>15%</b>
<b>Test 2</b>	06/14/2024	<b>25%</b>
<b>Final</b>	06/28/2024	<b>25%</b>

## Tentative Calendar

- **week 1**                      Vectors, Kinematics                      Chapters 3,2,4
- **week 2**                      Dynamics                                      Chapters 5,6
- **week. 3**                      Work, Energy and Momentum                      Chapters 7,8,9
- **week 4**                      Rotation, Torque and Angular Momentum                      Chapters 10,11
- **Week 5**                      Gravitations, Oscillations and Waves                      Chapter 13,15