

Physics 180
Yale University
Summer 2025 May 26-June27

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, 10th edition Chapters 1-15*

You may use any General Physics Book as a Reference and Textbook. All assignments and practice problems are from Halliday and Resnick

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 Waves.

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 specially during discussion.
- **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 tests. (**Note: There is no time for a Makeup Exam**)

Student Evaluation

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

Important dates

Test 1	06/02/2025	15%
Test 2	06/13/2025	25%
Final	06/27/2025	25%

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