

Physics 110 Syllabus Fall 2020

Hunter College of CUNY

Instructor: Jose G. Suarez

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Office Hours: Fridays 1-2PM or by Appointment

Lecturer (synchronous via zoom): Tuesdays and Thursdays 7-8:15PM

Recommended texts:

Physics: Principles With Applications 7th Edition, Giancoli,

Mastering Physics with Pearson eText -- ValuePack Access Card ISBN 13-9780321909770

Course ID: suarez85592

Course Information

Physics 110: 3 hours lecture, 3 hours lab and 1 hour recitation, 4.5 Credits.

Recitation is **MANDATORY** and will be Thursday nights 8:25pm - 9:15pm.

Zoom meeting invites will be emailed to your Hunter email before every class.

Teaching philosophy & approach: Fundamental physical principles are introduced and the concepts are further developed and reinforced through examples, applications and problem solving.

Homework: Online homework via MasteringPhysics (Pearsons).

Weekly lab exercises

Course Description

Physics 110 is the first semester of a two semester introductory physics course without calculus. This course is appropriate for pre-professional students (pre-med, physical therapy etc) and some majors (Biology, Chemistry, etc.)

It covers: Kinematics, dynamics, Newton's laws of motion and gravitation, momentum and energy conservation, rotational motion, circular motion, vibrational motion, the laws of thermodynamics, and kinetic theory of matter.

Math Pre-requisites: MATH 12400, or 12500, or 12550, or 15000, or 15500.

Algebra, geometry, and trigonometry are prerequisites of PHYS 110. Students with a poor mathematical background (especially algebra and geometry) do NOT do well in this course. If you do not have the necessary mathematics background, it is recommended to obtain it before proceeding with PHYS 110.

Teaching philosophy & approach: Fundamental physical principles are introduced and the concepts are further developed and reinforced through examples, applications, and problem solving.

Learning Outcomes:

- Learn the fundamental laws of physics pertaining to mechanics, fluids, vibrations and waves, and heat.
- Apply these laws to various physical systems via problem solving.
- Perform experiments, collaborate with a lab partner, collect data, perform error/statistical analysis of data, write a lab report.
- Develop the skill of synthesizing math formulas from word problems.

Attendance

Attendance is strongly recommended: In addition to the lecture important information regarding exams, homework, schedule etc. is communicated during lecture

Homework

- 12 weekly homeworks assigned via MasteringPhysics, 10 best will be counted to your homework grade.
- The Home work sets have a due date! Make sure you complete the homework before the due date.
- Late Work Grade will be decreased by 20% for each day it is late (after 5 days it goes down to zero.)

Laboratories

1. The lab is an essential part of the course.
2. The lab is 15% of the total grade.
3. Students must complete a minimum of 9 labs out of 11 to get a lab grade. If a student completes less than 9 labs, he/she will receive a zero for the missing lab(s).
4. The final lab scores are based on the lab reports and in-class performance.
5. Students who repeat the course must repeat the lab.

Exams

10 exams.

- All exams are pop quizzes!
- You will not receive advanced notice before an exam.
- You have to be ready to take the exam any time during the scheduled class time.
- Approximately 15 questions.
- Exams will be multiple choice with a mix of problem solving and conceptual questions.
- Lowest two grades will be dropped. **No makeup exam!**
- Exams will be on Blackboard

Course grade

Best 8 of 10 exams	65%
Best 10 homework set	20%
Lab	15%
Total	100%

Tentative Lecture Schedule

Chapters are to read before Lecture!

Week	Chapter	Topic
1	1,2	Intro, Measurements, 1-D Kinematics
2	3	2-D kinematics
3	4	Newton's Laws
4	5	Circular Motion and Gravity
5	6	Work and Energy
6	7	Linear Momentum
7	8	Rotational Motion
8	9	Static Equilibrium
9	10	Fluids
10	11,12	Oscillation, Waves, Sound
11	13	Temperature and Kinetic Theory
12	14	Heat
13	15	Laws of Thermodynamics

Credit/No Credit Grading Option

You may choose to be graded in this course on a Credit/No Credit basis. Before selecting this option, check with your departmental adviser and be aware that many colleges, professional schools, and employers may look with disfavor on Credit/No Credit grades and may even convert Credit to C and No Credit to F for their purposes, as described in the Hunter Catalog.

Academic Integrity

Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The college is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedure. Reproduction or distribution of class materials to internet sources will also be viewed as academic dishonesty. This includes but is not limited to websites such as Chegg and Course Hero.

Accessibility

In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical and/ or Learning) consult the Office of Accessibility located in Room 1214 B East building to secure necessary academic accommodations.

Hunter College does not discriminate against any student on the basis of pregnancy or related conditions. Absences due to medical conditions relating to pregnancy will be excused for as long as deemed medically necessary by a student's doctor and students will be given the opportunity to make up missed work. Students needing assistance can seek accommodations from the Office of Accessibility

Hunter College Policy on Sexual Misconduct

"In compliance with the CUNY Policy on Sexual Misconduct, Hunter College reaffirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

1. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444).

2. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link: <http://www.cuny.edu/about/administration/offices/la/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf>

Syllabus is subject to change

