Physics 120 Section Spring 2021, Hunter College of CUNY
Fully Online (Synchronous)

Instructor: **Dr. Bo Gao**
Office: **1240B HN**
Email: bgao@hunter.cuny.edu

Office Hours: Thursday: 1:00 pm - 2:00 pm, on Blackboard Collaborate Ultra, or by appointment (bgao@hunter.cuny.edu), emails will be responded ASAP and a Zoom link will be provided for the meeting. Make sure you identify yourself with your course code and course section in the subject line of the email.

Department Office Information: Room 1225 HN, Tel: (212) 772-5348.

Lecture: Monday, Wednesday, Thursday, 12:10 pm – 1:00 pm EDT, on Blackboard Collaborate Ultra
Recitation: Wednesday, 11:10 am – 12:00 pm EDT, on the same Blackboard Collaborate Ultra
Both the lecture and recitation will be recorded on Blackboard Collaborate Ultra. Please see below the student resources for Blackboard 9.1.
http://www.hunter.cuny.edu/it/blackboard/student-documentation-and-support-for-blackboard

List of supported web browsers:
https://help.blackboard.com/Learn/Administrator/Hosting/Browser_Support

Suggested Textbook: "Physics: Principles with Applications" Seventh Edition, by Giancoli (Pearson) ISBN-13: 978-0321625922; Older editions may be used.

Homework Assignments and Quizzes:
Through Mastering Physic Course ID: gao08710
https://mlm.pearson.com/northamerica/masteringphysics/

Course Description
Physics 120 is the second semester of a two semester introductory physics course without calculus. It covers Electrostatics, Current and electric circuits, Electromagnetic Induction and Electromagnetic Waves, Geometrical Optics and Optical Instruments, The wave nature of Light, Interference, Diffraction and Polarization, Special Relativity, Modern Physics and Quantum Theory.

You are expected to spend at least 5 hours on the reading and HW for each chapter besides the lecture and recitation.

Pre-requisite: Math 125, Physics 110 or Physics 111

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 electricity and magnetism, light and atomic physics.
- 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 casting word problems into mathematically and solve them.

Quizzes

- 9 pop quizzes, 2 of them will be dropped. Dates and time won't be announced in advance.
- Quizzes are cumulative. Each quiz is 21 minutes. Closed book. A formula list is provided below.

  https://www.dropbox.com/s/z27k7xtrh9wxidk/Complete_Formula_List_Physics_120.pdf?dl=0
- Types of questions:

  7 to 10 multiple choices questions.

  Concepts, principles, laws etc. (~30%)

  Simple quantitative questions, such as proportionality, variables dependency etc. (~30%)

  Problem solving questions. (~40%)
- **No mobile communication devices or internet searches and bathroom trips during the quizzes.**
- **No communications in any form among students during the quizzes.**
- **No makeup quizzes.**
- NIST Standard Time: https://www.time.gov/

Homework

- 11 Homework, 2 of them will be dropped.
- Intro to Mastering Physics, the practice quiz, and Pre-class Assignments don't count to your total grade.
- 10% late penalty over each day late, but it never deducts more than 50%.
- **No extensions after the due dates.**

Labs

- Mandatory, cannot get a course grade without it.
- 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).
- The lab scores are based on the lab reports and in-class performance.
- Students who repeat the course must repeat the lab.
- Please refer to the lab syllabus provided by your lab instructor.

Course grade

• 7 quizzes	70%
• 9 homework	15%
• Labs	15%
• Total	100%

No extra credit will be given.

The final letter grade will be based on students' relative standing in the class.

Curving may be done for the overall scores if the instructor finds it necessary.
No curving will be done for individual tests.

Hunter College Grading Scale

https://ww2.hunter.cuny.edu/students/academic-planning/degree-requirements/construct-an-academic-plan/gpa-calculator/grading-scale/

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.

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 AccessABILITY 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 AccessABILITY.

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. a. 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). b. 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

Verification of Enrollment (VOE)

All teaching faculty must complete a Verification of Enrollment for each student at the beginning of the term. Federal regulations concerning the distribution of financial aid state that a student must participate at least once during the first two weeks. For online sections, simply logging into a course site without active participation (in a discussion, assignment, etc.) is *not* considered participation. Aside from this federal requirement, CUNY is a non-attendance taking institution and you are not required to take attendance in any CUNY course.

Syllabus Change Policy

Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.
The changes to the syllabus will be announced in class and posted via Blackboard.

Tentative Online Course Schedule

Hunter College, CUNY

PHYS12000-01 (4300) & PHYS12000-1R01 (4667), Spring 2021, 01/29/2021 – 05/25/2021

WEEK	LECTURE TOPIC	SECTIONS	QUIZZES
1	Ch 16: Electric Charge and Electric Field	16.1-16.9	1
2	Ch 17: Electric Potential	17.1-17.5, 17.7-17.10	2
3	Ch 18: Electric Currents	18.1-18.7	3
4	Ch 19: DC Circuits	19.1-19.6	4
5	Ch 20: Magnetism	20.1-20.9	5
6	Ch 21: Electromagnetic Induction and Faraday's Law	21.1-21.5, 21.7, 21.10, 21.11	6
7	Ch 22: Electromagnetic Waves	22.1-22.5	
8	Ch 23: Light: Geometric Optics	23.1-23.9	7
9	Ch 24: The Wave Nature of Light	24.1-24.6, 24.10	8
10	Ch 25: Optical Instruments	25.3-25.5	
11	Ch 26: The Special Theory of Relativity	26.1-26.11	9
12	Ch 27: Early Quantum Theory and Models of the Atom	27.1-27.4, 27.8, 27.10-27.13	
13	Ch 28: Quantum Mechanics of Atoms	28.1-28.3, 28.5-28.8	

Last day to withdraw with a grade of "W": 02/19/2021.

Reading day: 05/18/2021.

Final Exams: 05/19/2021 – 05/25/2021

Hunter College spring 2021 Academic Calendar:

https://hunter.cuny.edu/students/registration/academic-calendar/