Physics 120

Algebra-based Introductory Physics II - Syllabus

Course Information

Physics 120, Section 01: 3 hours lecture, 2 hours lab and 1 hour recitation, 4.5 Credits
Additional information on Blackboard.

Contact Information

Dr. Tan-Na Lee tl2286@hunter.cuny.edu
Office hours: By appointments only

Course Mode of Instruction/Platform

The mode of instruction will be online synchronous. All classes will use the course Blackboard and Zoom as the primary means of communication. Blackboard is used to do testing and distribute material to students. Zoom as web-conferencing platforms will be used for live synchronous class instructions and proctoring for testing. During test, all students are required to turn on video unless getting permission from the instructor via email before the test.

Course Materials

Required texts: Physics: Principles with Applications 7th Edition, Douglas C. Giancoli, ISBN-13: 978-0321869661 This package eText with Modified Mastering

Course Description

Physics 120 is the second semester of a two semester introductory physics course without calculus. It covers Electrostatics, Current and electric circuits, Magnetism, 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.

Pre-requisites: Physics 110, Math 125,
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.

Grading Method & Scale

All sections of introductory physics will be curved, if necessary, to a comparable standard at the end of semester. Your final grades will be determined by your standing relative to your classmates in this class.

The grading is described in the table below.

2 best from 3 Midterms (No make up or retake)	40%

Online homework (Drop 2 lowest scores. No extensions)	15%
Attendance and participation	5%
Lab: Mandatory (Cannot get a grade for the course without it)	15%
Final exam is mandatory (Cannot get a grade for the course without it)	25%
	100%

Homework

The Homework sets have a due date! Make sure you complete the homework before the due date. No individual homework due date extension. Adaptive follow-up is optional and is not part of the grading system.

Laboratories

The lab is 15% of the total grade.

Attendance

In addition to the lecture important information regarding exams, quizzes, homework, schedule etc. is communicated during class

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.

Course Calendar & Content

Course Schedule (Exam & due dates fixed, but the rest is a guideline to help you set your study pace):

M	Tu	Wednesday	Thursday	Sunday
5/27—No Class	5/28— Ch 16 Zoom	5/29— Ch17 Zoom	5/30—Ch18 Zoom	6/2 **Ch 16-18 HW Due**
6/3— Ch 19 Zoom	6/4— Ch 20 & Review Zoom **HW of Ch19 Due**	**6/5— Exam 1 (Ch 16-19) In Class**	6/6— Ch 20 Zoom	6/9
6/10 —Ch 20 Zoom	6/11— Ch 21 Zoom	6/12 —Ch 21 Zoom	6/13— Ch 22 Zoom	6/16 **Ch20-22 HW Due**

6/17—Exam 2 (Ch 20-22) In Class	6/18— Ch 23 Zoom	6/19— School is Closed	6/20— Ch 24 Zoom	6/23 **Ch23-24 HW Due**
6/24—Ch 25 Zoom	6/25— Ch 26-1 & Review Zoom **HW of Ch25 Due**	**6/26—Exam 3 (Ch23-25) In Class**	6/27— Ch 26-2 Zoom	6/30 **Ch26-1 & 2 HW Due**
7/1—Ch 27-1 Zoom	7/2-— School is Closed	7/3—Ch 27-2 Zoom	7/4— School is Closed	7/7 **Ch27-1 & 2 HW Due**
7/8— Ch 28 Zoom	7/9— Ch 28 Zoom	7/10—Review Zoom **Ch28 HW Due**	**7/11—Final Exam In Class**	

Chapter	Sections omitted	Homework
16: Charge and Electric fields	16.10-12	13, 31, 33, 36, 64
17: Electric Potential	17.6.10,112	10, 19, 21, 23, 50, 72, 75
18: Electric Currents	18.8 - 18.10	5, 6, 21, 34, 39, 45, 63
19: DC Circuits	19.7-19.8	6, 11, 17, 25, 30, 44, 51
20: Magnetism	20.10 - 20.12	8, 11, 12, 18, 19, 41, 45, 75, 86
21: Induction	21.5-6, 21.8-9, 21.12 -15	1-4, 7, 11, 12, 14, 21, 34, 42, 48
22: EM waves	22.6, 22.7	21, 23, 42, 43
23: Geometric Optics	23.10	3, 4,11, 15, 31, 32, 38, 52, 53, 59, 62, 72
24: Wave Nature of Light	24.7-24.9, 24.11-12	5, 7, 10, 23, 26, 27, 30, 34, 35, 43, 71, 79
25: Optical Instruments	25.1 25.3-25.12	12, 13, 14, 15
26-1: Special relativity	26.6	7, 8, 10, 13, 55,57
26-2: Special relativity		17, 18, 27, 30, 36, 49, 52, 54,61,64

27-1: Early Quantum theory	27.5, 27.6, 27.9	18, 19, 20, 21, 27, 69, 86
27-2: Early Quantum theory		41, 45, 57, 60, 82
28-1: Quantum Mechanics	28.5-12	2, 4, 8, 13, 16, 21, 22, 50, 51, 56

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Hunter College Policy on 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 Procedures."

ADA Policy (AccessABILITY)

"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 E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772- 4857 or (212) 650-3230."

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

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. Students are expected to find out about changes to the syllabus via Blackboard, class attendance or email.