Physics 10 - Intro to Physics

with textbook based on openstax™ College Physics

Course Overview

Course Code and Semester: **Physics 10, Class Number 20904, Spring 2026**
Course Description: Elementary introduction to the field of physics: Mechanics, heat, electricity and magnetism, sound, optics, and modern physics. (Satisfies COA AA/AS area 1; CSU area B1; contact the instructor regarding UC transferability of this course)
Recommended Preparation: Math 201 (elementary algebra) or Math 202 (geometry)

Who should take this course?

- Non-science major students who need to satisfy a physical science *without lab* requirement.
- Intended physics and engineering major students, if they have no prior exposure to physics (high school physics class or general knowledge) and/or if they are not ready to take Physics 4A yet.
- Students who want to see all the topics covered in study of physics in one semester.

If you need to satisfy "physical science with lab" requirement, please contact the instructor; we offered the Physics 10L lab course, for the first time in Spring 2019 (so that Physics 10 and Physics 10L together will satisfy "physical science with lab" requirement), and we are hoping to offer it again some time. As always, please check with your transfer institution, to ensure that this course meets the requirements of their program.

Student Learning Outcomes

1. Using written language, students explain and discuss the physics concepts listed in the course content, and apply them to everyday phenomena and interdisciplinary examples.
2. Students apply simple formulas to calculate measurable quantities that describe the physical environment related to the concepts of physics.
3. Students explain and discuss physical principles underlying classroom demonstrations.

Instructor Information

Hi! My name is **Andrew Park**. The best way to contact me for course-related matters is through Canvas **Conversations** (https://peralta.instructure.com/conversations) tool (for non-course matters, best way is by email: **bpark@peralta.edu** (mailto:bpark@peralta.edu)). You will hear from me regularly throughout the semester, usually through the **Course Announcements** (https://peralta.instructure.com/courses/84841/announcements) . If you need to talk (rather than write) to me, please see office hour information below.

Office Hours / Virtual Class Sessions

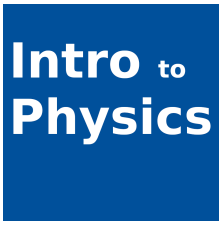
Following are office hours and virtual class session schedule for Spring 2026. *(Last updated at the semester start)*

Online virtual class session (attendance-optional; most of it recorded) is held on **Fridays at 2 p.m.** Reminder and agenda of the session is announced earlier in the day (or the evening before); the sessions are subject to occasional cancellation, and the cancellations will be announced ahead of time.

In-person office hours (for those who can make use of it) will be held in **ATLAN 100 (Physics Lab Room), Mondays from 6 p.m. to 8 p.m.** Drop by with any questions, or just to work on course content using the building WiFi. I also have office hours **Tuesdays/Wednesdays/Thursdays from 5:30 p.m. to 6 p.m.** (30 minutes before the start of class sessions).

For appointments outside of regularly scheduled office hours, please email me to arrange for the time. I usually respond to appointment request emails within 24 hours, and often sooner.

Course Materials



Your course materials are free and available digitally. We are using a version of textbook derived from OpenStax *College Physics* (pared down to fit into one semester). You can access your textbook in following ways:

- Access it **online on LibreTexts.org (https://phys.libretexts.org/Bookshelves/Conceptual_Physics/Introduction_to_Physics_(Park))** (this is always the latest version).
- Download **PDF (https://peralta.instructure.com/courses/84841/files/12815753?wrap=1) (https://peralta.instructure.com/courses/84841/files/12815753/download?download_frd=1)** (generated November 2025, size 66 MB).

Relevant textbook sections will be linked to from the Canvas pages, along with additional materials on as-needed basis. Additional course materials, including homework assignments, are available on the **course Canvas site (https://peralta.instructure.com/courses/84841/assignments/syllabus)**.

Important Notes

Grading Standards

The course letter grades are assigned on the following standards:

- **A - Excellent understanding**: After some effort, most of the topics covered in lecture makes sense; student is working toward mastery of all physics concepts and problem-solving approaches necessary to answer most of the homework questions correctly. There are no major gaps in understanding.
- **B - Good understanding**: After some effort, majority of the key topics covered in lecture makes sense; student is familiar with different physics concepts and problem-solving approaches for different homework questions and is working toward mastery of these in at least one major course unit. There may be some gaps in understanding but nothing that prevents progress in class.
- **C - Fair to Poor understanding**: After some effort, at least one or two key topics covered in lecture makes sense; while the student is struggling with application of physics concepts and problem-solving approaches, once the "correct formula" is given, the student can plug in the numbers correctly and obtain correct final numerical answer. The student can accurately identify areas of understanding and gaps in understanding.
- **Not Passing - No understanding or Not enough work**: The student has not completed a majority of homework assignments and, when given a list of topics to discuss, struggles to accurately identify the topics in which significant improvement in understanding is necessary.

Points and scores are not used to determine your course letter grade; any scores kept are kept for course item completion and evidence of effort only. For assessment of your course letter grade, you will tell me (in special-purpose Canvas Assignments set aside for this) what grade you think you should get, and we will attempt to come to a consensus—between how well you feel you understood physics and how much of that I see as your instructor.

Additional detail is given on course Canvas page, **Physics 10 Grading Standards (https://peralta.instructure.com/courses/84841/pages/physics-10-grading-standards)** (may need to unlock Module requirements to access the page).

ADA Accommodation

Students who may need accommodation for their disabilities are encouraged to contact **Student Accessibility Services (https://alameda.edu/students/student-accessibility-services-sas/)** as soon as possible in the semester so that reasonable (and *legally mandated*) accommodations may be made. The contact information is at the bottom of the SAS website (if you are in a hurry, this is their email: **SAS.Alameda@peralta.edu (mailto:SAS.Alameda@peralta.edu)**). Usual accommodations made include extended exam time and/or transcription service. Most students with a diagnosed learning disability (such as ADHD or ADD) are eligible. If you are not sure whether you are eligible, please check with a SAS counselor. The details regarding the nature of your disability are confidential and not shared with your instructor.

Instructor's personal note: In my experience, many students who SHOULD HAVE utilized this service do not use them and suffer consequences academically. The goal of SAS (and ADA in general) is that you should be judged on your ABILITY, not disability. For those students who are eligible, the ADA accommodation is what will help you express your full potential (not a special treatment or something to be stigmatized against).

Talk to a SAS counselor today; the worst that can happen is they will tell you that you are not eligible and you wasted a little bit of time.

Tutoring and Academic Support

For tutoring support, please check **Learning Resources Center (https://alameda.edu/students/learning-resources-center-lrc/)** website for access information.

Preferred Names and Pronouns

Please help me refer to you in the way you prefer by completing following at the beginning of the semester:

- **[GRADED DISCUSSION] Introduce Yourself** (https://peralta.instructure.com/courses/84841/discussion_topics/1400915) (also accessible from Modules, may need to complete Module requirements to access)

I will always do my best to pronounce your name correctly and refer to you with respect. Please help me do that by correcting me if I mispronounce your name—or any other mistakes I may make unwittingly in how I refer to you.

Additional Advice

In the remainder of this syllabus, you will see course policies and other additional detail that may be good to know. But in terms of how you can best prepare yourself for *success* in this class, additional advice is given throughout the Canvas module, **Getting Started** (https://peralta.instructure.com/courses/84841/modules/714079) . So, please, work through the **Getting Started** (https://peralta.instructure.com/courses/84841/modules/714079) module in the first couple days of the semester (or as soon as you can).

Schedule of Assignments

The **Modules** (https://peralta.instructure.com/courses/84841/modules) view in Canvas shows all course materials, assignments, and due dates on a single page, and this is the recommended view for the class. Please use the **Modules** (https://peralta.instructure.com/courses/84841/modules) view to see upcoming assignments and their due dates. Please look at the end of the syllabus for a summary of topics covered, with textbook references.

Fine-print details are below—I encourage you to read through them (it lays out course policies in detail), but I will remind you of anything that is important.

The Fine Print - Course Policies

Please read on for the full listing of course policy. If you would rather skip it, that is fine; I will remind you of anything that is important.

- **Registration**: After the last day to register for classes (see **academic calendar** (https://www.peralta.edu/admissions/academic-calendar-finals-schedule-enrollment-calendar)), you must be registered in the class in order for you to receive credit. No students can be added after this date.
- **Attendance**: This is an asynchronous online class and no synchronous meeting attendance is required. However, students who miss assignments due in the first week will be dropped from class as "no show". Also, instructor may drop a student if the student misses an excessive number of assignments without excuse. (See **College of Alameda 2025-2026 catalog** (https://coa.curriqunet.com/catalog/iq/2079/2109) for the college policy on attendance for face-to-face classes, which this is modeled after.)
- **Academic Integrity**: Everything you turn in must be your own work. If you use sources other than the textbook, please clearly cite it and give credit where it is due. Allowing another student to copy your own work also constitutes academic dishonesty (there is a fine line between group collaboration and dishonest copying of others' work; I will help you see it, as needed). Please refer to **College of Alameda 2025-2026 catalog** (https://coa.curriqunet.com/catalog/iq/7433/7453) for the college policy on academic dishonesty and possible disciplinary measures.
- **Ethical Use of AI Tools**: If any artificial intelligence (AI) tools are used in completing your class work, they must be used ethically. Unethical use of AI tools is academic dishonesty and will have the same consequences as academic dishonesty. For ethical use of AI tools, you must: (1) disclose any work that was created with use of AI tools, (2) review and understand the AI generated content, and (3) be responsible yourself for any mistakes or errors in the AI generated content.
- **Honor Code Pledge**: You must complete the honor code pledge (accessible within the first few course Modules) to continue in this class. Students who do not maintain their honor code pledge may become ineligible to participate in certain course activities or be required to complete activities in a format that does not assume honorable conduct of participants.
- **Schedule Subject to Change**: Assignment and assessment schedules are subject to change. Any changes will be announced through Canvas.
- **Late Assignments**: All assignments are due on the date noted. Canvas will accept late submissions on essay or discussion assignments (the instructor reserves right to grade late submissions in appropriate cases). MyOpenMath assignments must be extended using a "late pass". Thirty-six late passes are given at the beginning of semester, and each late pass extends a MyOpenMath assignment deadline by one week (168 hours). If you have run out of late passes, you are advised to (1) schedule a 1-on-1 meeting with the instructor to plan the best path forward and (2) continue working on the course material using MyOpenMath practice mode (scores in gradebook won't reflect any practice mode attempts).
- **Allowed/Prohibited Items During Timed Assessments (open book)**: Certain assessments are timed and are used similarly as "exams" in face-to-face classes. Following is the description of what you may use and what you may not use during these assessments.

  - Allowed: calculators, foreign language dictionaries, any material that is provided in the context of the course (usually through Canvas), and the means used to access the assessment.
  - Prohibited: any outside help, including but not limited to: (a) any individual other than the instructor providing help during the assessment, (b) external websites, unless they are used purely for calculation function, and (c) external references, either in digital or paper-bound format, other than those allowed above.
- **Holistic Grading Rubric**: A holistic grading scale is used for grading essay or freeform-answer questions.
  - 5 (out of 5 points possible): "Excellent understanding." The student clearly understands how to solve the problems; one or two minor mistakes can appear on a "5" solution, if they don't lead to larger conceptual errors.
  - 4: "Good understanding." The student understands the main concepts and problem-solving techniques but is missing one major concept, or made one major mistake that may involve conceptual misunderstanding.
  - 3: "Fair understanding." The student started to set up the solution and is on the right track of applying the problem-solving techniques but is several major steps (or mistakes) away from being able to solve it.
  - 2: "Poor understanding." The student jots down some formulas from memory that may be relevant to the problem but shows little conceptual understanding of how they should be used.
  - 1: "No understanding." The student writes down something that has something to do with the problem.
  - 0: "Blank." Blank answers.

  Any requests for consideration of grade change must be submitted in writing.
- **Course Grading Standards**: This course uses a version of **contract grading** (https://en.wikipedia.org/wiki/Contract_grading) . Please review **Physics 10 Grading Standards** (https://peralta.instructure.com/courses/84841/pages/physics-10-grading-standards) and raise any questions in a timely manner.

Topics Covered

Following is the 16-week schedule of topics being covered. Chapter references are for ***Introduction to Physics*** *(https://phys.libretexts.org/Bookshelves/Conceptual_Physics/Introduction_to_Physics_(Park))* by Andrew Park (derived from *Concepts of Physics* by Bobby Bailey, which is derived from *College Physics* by OpenStax). Please note that there is a chapter numbering shift between the **LibreTexts version** (https://peralta.instructure.com/courses/84841/files/12815753?wrap=1) (https://peralta.instructure.com/courses/84841/files/12815753/download?download_frd=1) and the **earlier CNX version** (https://peralta.instructure.com/courses/84841/files/12470264?wrap=1) (https://peralta.instructure.com/courses/84841/files/12470264/download?download_frd=1) ; the numbering here follows the LibreTexts version.

- **Week 1**: Introduction (Chapter 0 - Introduction)
- **Week 2**: Motion (Chapter 1 - Kinematics)
- **Week 3**: Forces (Chapter 2 - Dynamics)
- **Week 4**: Forces Wrap-Up and Unit 1 Timed Assessments (Chs. 0 - 2)
- **Week 5**: Energy and Momentum (Chapter 3 - Work and Energy / Chapter 4 - Impulse and Momentum)
- **Week 6**: Oscillations and Waves (Chapter 5 - Oscillations and Waves)
- **Week 7**: Rotation and Fluids (Chapter 6 - Rotation / Chapter 7 - Fluids)
- **Week 8**: Mechanics Wrap-Up and Unit 2 Timed Assessments (Chs. 3 - 7)
- **Week 9**: Thermal Physics (Chapter 8 - Thermal Physics)
- **Week 10**: Electricity (Chapter 9 - Electricity)
- **Week 11**: Magnetism and Light (Chapter 10 - Magnetism / Chapter 11 - Light)
- **Week 12**: Unit 3 Wrap-Up and Timed Assessments (Chs. 8 - 11)
- **Week 13**: Quantum Mechanics (Chapter 12 - Quantum Mechanics)
- **Week 14**: Special Relativity (Chapter 13 - Special Relativity)
- **Week 15**: Nuclear and Particle Physics (Chapter 14 - Nuclear and Particle Physics)
- **Week 16**: Unit 4 Wrap-Up and Timed Assessments (Chs. 12 - 14)