



General Physics I  
PHYS 2050  
Fall 2020  
August 24<sup>th</sup> – December 11<sup>th</sup>  
Section-1X Tuesday, 8:45am – 10:00am  
Section-2X Thursday, 8:45am – 10:00am  
Location, AC 203

Final exam:  
Dec. 7-11. (exact day & time TBD)

Welcome to PHYS 2050 – General Physics I!

### INSTRUCTOR INFORMATION

**Instructor:** Nathan J. Dawson  
**Email:** [ndawson@hpu.edu](mailto:ndawson@hpu.edu)  
**Office:** AC 311A  
**Virtual office hours:** 10:30am – 12:00pm, Tues/Thurs

### COURSE INFORMATION AND REQUIREMENTS

**Section 1X meeting time:** Tuesday, 8:45am – 10:00am  
**Section 2X meeting time:** Thursday, 8:45am – 10:00am  
**Course meeting location:** AC 203 (Hawaii Loa Campus)

If the class meets virtually during any given week, then we will meet via Blackboard Collaborate Ultra. A link will be made available in Blackboard and an announcement will announce the that the class will meet virtually instead of in person.

**Required Resources:** H. D. Young and R. A. Freedman, *University Physics with Modern Physics*, 15<sup>th</sup> edition  
Pearson's Mastering Physics online homework course code: **dawson44748**

### COURSE DESCRIPTION

**Course Objectives:** this course is 3 credits and intended as an introduction to the physical properties of kinematics, forces, energy, momentum, angular motion, fluids, gravitation, harmonic motion, wave motion, and thermodynamics using calculus. The main focus of this course is to familiarize students with the reasoning behind basic physical concepts and their applications. The course shall increase students' ability to apply the basic ideas of algebra and calculus to physical models. The course also helps develop critical thinking skills and scientific reasoning methods through practice by the student.

**Prerequisite:** MATH 2214 to 2325 **or** MATH 2327 to 2999 **or** MATH 3000 to 3300 **or** MATH 3302 to 3999 **or** MATH 4000 to 4999 **or** HPUM 2215 to 3215 **or** TCM 2215 to 3320 **or** TCM 3330 to 4000.

**Method of Instruction:** This is a traditional lecture-style course.

### ASSESSMENT, GRADING SCHEME, and COURSE SCHEDULE

**Student work:** the course is designed as a "flipped" classroom. Each student must read the book chapter and complete the posted interactive lecture notes prior to the in-class or virtual lectures. homework will be given online through the online homework portal. Each student will need to purchase as access code. The problems will cover the material presented in the book, interactive lecture notes, or in-class/virtual lecture. In addition to the online homework, each student will benefit from answering some questions at the end of each chapter. Since the course material progresses quickly, it will help to read the material before it is presented in class. Working together on the homework is encouraged, but be sure you are able to solve these and similar problems on your own.

**Examinations:** there will be two 75-minute-long, in-class examinations and one 135-minute-long final examination. The exams will consist of general physics problems and conceptual questions. All in-class exams will be closed book and closed notes, the exam cover will be used to give the student select formula to be referenced during the exams. It is best to be familiar enough with all of the formulas such that the formulae on the cover sheet are used only as a reference. **Important:** In the event of a University shutdown or a major illness keeps student(s) from meeting in person during an exam period, an online examination will be scheduled. The duration, grading scheme, and difficulty of the online examination will not be the same as the closed-book, closed-notes, in-class exams.

<b>Homework</b>	25%
<b>In-class exams (22% each)</b>	44%
<b>Final exam</b>	31%

<b>A</b>	92 – 100%
<b>A–</b>	90 – 91%
<b>B+</b>	87 – 89%
<b>B</b>	82 – 86%
<b>B–</b>	80 – 81%
<b>C+</b>	77 – 79%
<b>C</b>	72 – 76%
<b>C–</b>	70 – 71%
<b>D+</b>	67 – 69%
<b>D</b>	60 – 66%
<b>F</b>	0 – 59%

**Course Schedule:** (Examinations are tentatively scheduled)

<b>Item</b>	<b>Description</b>
<b>Chapter 1</b> (week 1)	Units, Physical Quantities, and Vectors
<b>Chapter 2</b> (week 2)	Motion Along a Straight Line
<b>Chapter 3</b> (week 3)	Motion in Two or Three Dimensions
<b>Chapter 4</b> (week 4)	Newton’s Laws of Motion
<b>Chapter 5</b> (week 4)	Applying Newton’s Laws
<b>Chapter 6</b> (week 5)	Work and Kinetic Energy
<b>Chapter 7</b> (week 5)	Potential Energy and Energy Conservation
<b>Examination 1</b>	<b>09/29 &amp; 10/01</b>
<b>Chapter 8</b> (week 7)	Momentum, Impulse, and Collisions
<b>Chapter 9</b> (week 8)	Rotation of Rigid Bodies
<b>Chapter 10</b> (week 8)	Dynamics of Rotational Motion
<b>Chapter 12</b> (week 9)	Fluid mechanics
<b>Chapter 13</b> (week 9)	Gravitation
<b>Chapter 14</b> (week 10)	Harmonic motion
<b>Examination 2</b>	<b>Week of 11/02 – 11/06</b>
<b>Chapter 15</b> (week 12)	Mechanical waves
<b>Chapter 16</b> (week 13)	Sound and hearing
(week 14)	<b>Thanksgiving</b>
<b>Chapter 17</b> (week 15)	Temperature and heat
<b>Chapter 18</b> (week 15)	Thermal properties of matter
<b>Final Examination</b> (cumulative)	<b>Week of 12/07 – 12/11</b>

## INSTRUCTOR POLICIES AND EXPECTATIONS

### Attendance and Participation:

- Each student is expected to attend all lectures, either in-class or virtual.
- Each student is expected to **read ahead** in the book chapter and **read through** the posted online lectures prior to attending the in-class (or virtual) lectures.
- Each student is expected to be ready for testing prior to the exam.

**Instructor availability:** students are encouraged to visit any of my virtual office hours. I will also be available in my office after each laboratory. If none of these times are available to the student, then we can schedule separate meetings. To schedule a meeting please use my HPU email [ndawson@hpu.edu](mailto:ndawson@hpu.edu) and not the blackboard email. I should receive the email and respond within a day; however, if you do not receive a timely response, then please send a follow-up email.

**Absences and make-up exam policy:** all absences, periods of time when a student is unable to complete course work due to a reason such as illness, military duty, or family emergency, must be coordinated with the instructor. Students should make every effort to notify the instructor **PRIOR** to the absence as well as the anticipated duration. If you cannot notify the instructor prior to the absence, please notify the instructor as soon as possible. This record of absences will be important if an **incomplete** grade and course extension are necessary due to extended absences. If a student has an excused absence on the day of an in-class exam, then a different exam will be given of *at least* the same level of difficulty as the regularly scheduled exam.

**Homework policy:** All homework problems must be completed prior to the deadline Hawaii Time.

**Withdrawal:** If you need to make any changes to your registration, including withdrawing from or adding courses, return to your HPU advisor for assistance.

For specific deadlines regarding dropping the course with a withdrawal "W" grade and with no GPA penalty, but possible loss of some or all of the tuition. Pay particular attention to the dates associated with withdrawing from the course. It could determine whether you get any tuition back in the event you need to drop the course.

**Incomplete:** Students who are unable to complete course requirements due to circumstances beyond their control (e.g. Military duty, illness, natural disaster ...) can make a written application to me with documentation for an incomplete "I" grade and complete the course requirements after the end of the course.

**Extra Credit:** **There is no extra credit in this course.**

**Academic Honesty:** All Students are expected to adhere to the University's policies regarding academic honesty. The policy of Hawai'i Pacific University is clear regarding academic dishonesty. Any student, who cheats on an academic exercise, lends assistance to others, or who hands in, as a completed assignment, work that is not his or her own will be penalized. The ultimate penalty is suspension from the University. The term "academic exercise" includes all forms of work submitted for points, grades, or credit. Please see the Student Handbook for the full policy at [www.hpu.edu/studenthandbook](http://www.hpu.edu/studenthandbook).

## UNIVERSITY POLICY AND SUPPORT

**HPU's Online Help:** HPU Client Services at (808) 566-2411 or email: [helpdesk@hpu.edu](mailto:helpdesk@hpu.edu) for technical assistance.

**Bookstore:** Books are available at the HPU Bookstore at the campus where this course is offered (Downtown or Hawaii Loa) and online (all campuses) at [www.hpu.bncollege.com](http://www.hpu.bncollege.com). Rentals and eBooks are available for many of the course materials. You can contact the HPU Bookstore at 808.544.0290 if you have any questions.

**Accessibility Services (ADA Accommodations):** Under the Rehabilitation Act of 1973 (Section 504), the Americans with Disabilities Act Amendments Act 2008 (ADAAA), and Title III (Public Accommodations) Hawaii Pacific University does not discriminate against individuals with disabilities. Any student who feels he/she may need an

accommodation based on the impact of a disability is invited to contact Accessibility Services at HPU (808-544-1197); at [access@hpu.edu](mailto:access@hpu.edu), or at the LB Bldg., Suite 602, 1060 Bishop Street). This is a necessary step in order to ensure reasonable accommodations in a course. Students are not expected to disclose their specific disability to the professor; Accessibility Services will provide a letter for an instructor explaining the accommodations and NOT the nature of the disability. If you would like to discuss other concerns, such as medical emergencies or arrangements in the event of an emergency evacuation, please make an appointment to talk with the professor as soon as possible.

**Counseling & Behavioral Health Services (CBHS):** CBHS provides current HPU students with free and confidential psychological counseling. Sometimes the stress of school along with personal issues can be too much to handle. CBHS provides the opportunity for students to discuss any personal problems or concerns and explore solutions. Appointments can be scheduled by phone at 808-687-7076 or in person at the Downtown campus at UB 905. Office hours are Monday–Friday, 8:00 a.m. to 5:00 p.m.

**Military Veteran Center (MVC):** MVC has one full time mental health provider from the Veterans Administration who offers confidential psychological counseling to military veterans. Sometimes, the transition from military to civilian life, managing school, and other personal issues can be challenging. MVC has an onsite provider at the downtown campus and appointments can be scheduled by phone at 808-763-7470. Office hours are Monday–Thursday, 8:00 a.m. to 5:00 p.m.

**Title IX - Sexual Discrimination and Sexual Misconduct Policy:** HPU is committed to providing an educational environment free from sexual discrimination. Students, faculty and staff must report violations of sexual harassment, sexual assaults, stalking, domestic violence, dating violence, and retaliation to trigger corrective and preventative actions as well as victim support services. Victim support services include assistance with filing police reports, referrals to counseling and medical providers, assignment of a victim advocate, and assistance with academic accommodations. Faculty and students who become aware of such violations should contact the Title IX Coordinator (808-687-7014) or file an anonymous report using the Compliance Hotline (877-270-5054 or [www.tnwinc.com/hpu](http://www.tnwinc.com/hpu)). More details can be found at [www.hpu.edu/studenthandbook](http://www.hpu.edu/studenthandbook).

**Security & Safety:** Help keep our campus safe and secure. For emergency situations, call 911; for non-emergencies, contact HPU security (808-544-1400). Timely reports of observations to security and the police can go a long way in preventing future crimes. Also, HPU security provides transportation or a walking escort at the Hawaii Loa campus, and a walking escort on the Downtown campus for anyone walking alone on foot to any university parking lot, facility or city bus stop. Call 808-236-3515 (Hawaii Loa) and 808-544-1400 (Downtown)—a security officer will be sent to your location. At military base locations, call Base Security at 808-474-2222. To receive critical information via text messaging, update your mobile number with Rave Alert (<http://phone.hpu.edu>), HPU's emergency text program. Go to <https://www.hpu.edu/security/index.html> for more about campus security and emergency preparedness.

**Tutoring:**

Email: [tutoring@hpu.edu](mailto:tutoring@hpu.edu)

Phone: (808) 544-9334