

PHYS 100  
Survey of Physics  
Spring 2023

**Instructor:** Dr. Chad Junkermeier  
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**Lecture:** PHYSCI 217, 1:30 pm - 2:20 pm MWF,

**Office Hours:** Wed 2:30 pm - 4:20 pm

**Final:** Friday, 12 May 2023, 2:15 – 4:15 pm

**Course Description:** Mechanics, electricity and magnetism, waves, optics, atomic and nuclear physics. Only algebra and geometry used. For non-science majors.

**Required Text Books:**

- Basic Physics, A Self-Teaching Guide (3rd edition), by Karl F. Kuhn, Frank Noschese
- The Physics Book: Big Ideas Simply Explained, by DK (Author), Jim Al-Khalili (Foreword)

**Supplies You Might Need:**

- A scientific calculator is recommended-you will not be able to use your cell phone calculator during tests.
- Please bring a notebook and writing utensil to take notes in class.

**Learning Outcomes:** After successfully completing this course students will be able to:

- Formulate and use the scientific method.
- Develop analytical skills for problem solving.
- Survey a broad landscape of physical phenomena and descriptive models.
- Understand how diverse physical properties fit into unifying physical theories.

**Grading:** Your grades will be determined from your combined score on the homework, Student Examples, quizzes, and exams.

**Grade Determination:**

Homework	40%
Tests	45%
Final Exam	15%
Total	100%

**Grading Assignment:**

The letter grade will be assigned according to the tentative grading scale:

<u>Total points earned</u>	<u>Grade</u>
85 - 100%	A
70 - 85%	B
55 - 70%	C
40 - 55%	D
Below 40%	F

**Homework:**

**Homework Tips for success:**

1. Write out all of your homework in a notebook. Use full sentences to tell yourself what you were doing so you can easily refer to your homework when studying for tests. Further thoughts on neatness can be found on the following webpages:
  1. <https://www.purplemath.com/guidline.htm>,
  2. <https://math.stackexchange.com/questions/393711/importance-of-neatness-organization-speed-in-math>,
  3. <http://www.physics.montana.edu/classes/446/spring15/documents/syllabus.pdf>
2. Work in groups to complete homework. This allows you to learn from and teach one another.

**TESTS:** There will be no make-up tests. However, the test with the lowest score will be dropped. We will have special arrangements for students who are UH athletes or other university required absences.

**Academic Honesty:** The student is expected to take tests without outside assistance. Any student caught cheating (or enabling another student to cheat) on a test will automatically receive a zero for that test and will be reported to the Office of Student Conduct. In all cases of cheating, the materials involved will be confiscated. Cheating is defined as (i) the use of any unauthorized aid during a test, (ii) obtaining help from another student during a test, (iii) knowingly giving aid to another student during a test, and (iv) duplicating or substituting another person's work as one's own work (plagiarism).

**Class Conduct:** The following rules constitute a minimum of expected behavior in class and will be enforced. Violation may result in your being asked to leave the class for the day and given an absence. Rules:

- Arriving late for class is distracting for other students and the instructor, so please be on time.
- Laptops and cell phones are discouraged in class. iPads for note taking are allowed.
- Eating and drinking in classroom is forbidden.
- CLASS ATTENDANCE IS HIGHLY RECOMMENDED. The in-class questions can only be answered if the student is present for the activity during the class session. If you cannot make it to class for whatever reason, make sure that you know what happened during the lecture that you missed.
- If you have to leave a class early, inform me in advance. Please be considerate and sit near the door.
- Be Honest, Respectful, and Prepared.

**Class Format:** Class time will be used to present and discuss material for the course. It is expected that students will be prepared for the scheduled lessons by reading assigned chapters. Students should participate as much as possible for the maximum benefit.

**Changes:** I reserve the right to modify any aspect of this syllabus at any time if I believe that such a change will allow the students in this class to better meet the course objectives. If I do change the syllabus I will explain the changes in class and provide a written handout immediately.

**Campus Security: (808) 956-6911**

**Disabilities Accommodations Statement:** Reasonable accommodations will be provided for students with documented physical, sensory, systemic, cognitive, learning and psychiatric disabilities. If you believe you have a disability requiring accommodations, please notify EEO/AA Office at (808) 956-7077 or [eeo@hawaii.edu](mailto:eeo@hawaii.edu).

**Student Code of Conduct:** UHM supports a positive educational environment that will benefit student success. In order to ensure this vision, UHM has established the UHM Student Code of Conduct to ensure the protection of student rights and the health and safety of the community, as well as to support the efficient operation of all programs. All currently enrolled students at UHM are required to abide by the UHM Student Code of Conduct. A copy of the most current Student Code can be found on the university's website: [http://www.studentaffairs.manoa.hawaii.edu/policies/conduct\\_code/](http://www.studentaffairs.manoa.hawaii.edu/policies/conduct_code/)

**TITLE IX:** The University of Hawaii is committed to providing a learning, working and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, sexual exploitation, gender-based harassment, domestic violence, dating violence, and stalking. If you or someone you know is experiencing any of these, the University has staff and resources on your campus to support and assist you. Staff can also direct you to resources that are in the community.

**Assessment:** A sample of your work may be anonymously used to assess student achievement of the program learning outcomes for the General Education standards.

**Additional Title IX information:** Title IX prohibits discrimination on the basis of sex in educational programs and activities that receive federal funding. Specifically, Title IX prohibits sex discrimination; sexual harassment, and gender-based harassment, including harassment based on actual or perceived sex, gender, sexual orientation, gender identity, or gender expression; sexual assault, sexual exploitation; domestic violence; dating violence; and stalking. For more information regarding your rights under Title IX, please visit: <http://www.hawaii.edu/titleix>

As a member of the University faculty, I am **expected to immediately report** any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.

**Non-Discrimination Statement:** The University of Hawai'i System Executive Policy EP 1.204, declares and reaffirms its commitment to the University's equal education and employment opportunity policy. The University is committed to a policy of nondiscrimination on the basis of race, sex, gender, sexual orientation, age, religion, color, national origin, ancestry, handicap, domestic violence, marital status, arrest and court record, gender identity, and veteran status. This policy covers admission and access to, and participation, treatment, and employment in the University's programs and activities.

**UH Email:** Please check your hawaii.edu email daily. Instructors, administration and other campus programs will send important information frequently including notifications for class cancellations and important deadlines.

**Getting Help:** The following resources are available free-of-charge to current UH Manoa students:

- Physics Lab TAs (mostly graduate students in Physics) hold ~30 hours/week of drop-in office hours in Watanabe Hall Rm. 421 (our Physics Library & Study Center). Although lab TAs must give first priority to students with lab- related questions, they can also assist with lecture homework problems or other physics questions as time permits. Scroll halfway down this page for a master schedule of all TA names/days/hours: [https://www.phys.hawaii.edu/~philipvd/23\\_spring\\_intro\\_labs\\_uhm.html](https://www.phys.hawaii.edu/~philipvd/23_spring_intro_labs_uhm.html)
- The Natural Sciences Learning Emporium in Bilger Addition 209 is open daily for all students to seek free, drop- in assistance with lower-division math or science classes. Schedules of tutors for physics (coming soon) and other STEM subjects are posted online here: <http://uhnatsci.org/emporium/tutorschedules.php>
- The Learning Assistance Center offers free one-on-one tutoring by appointment for physics and many other introductory math & science courses. Make an appointment online at least 24 hours in advance: <https://manoa.hawaii.edu/undergrad/Learning/tutoring-by-appt/>
- The Housing Success Center is open Sunday–Thursday, 6:00–9:00pm, for free walk-in assistance for physics and other introductory math & science courses. Check their online schedule of tutors & subjects: <https://manoa.hawaii.edu/undergrad/Learning/walk-in-tutoring/>