UNIVERSITY of HAWAI'I
WINDWARD COMMUNITY COLLEGE
Ke Kulanui Kaiāulu o ke Koʻolau

PHYS 272: General Physics II

Spring 2026

3 Credits | CRN 63436

* This syllabus and/or our Course Schedule is subject to change at any time. I will notify you of any changes via (indicate communication tool/method). Mahalo!

About Windward Community College

Mission Statement

ʻO keia ka wā kūpono e hoʻonui ai ka ʻike me ka hoʻomaopopo i kō Hawaiʻi mau hoʻoilina waiwai. Aia nō hoʻi ma ke Kulanui Kaiāulu o ke Koʻolau nā papahana hou o nā ʻike ʻake akamai a me nā hana noʻeau. Me ke kuleana koʻikoʻi e hoʻohiki ke Kulanui e kākoʻo a e hoʻokumu i ala e hiki kē kōkua i ka hoʻonui ʻike a nā kānaka maoli. Na mākou nō e hoʻolako, kākoʻo a paipai i nā Koʻolau a kō Oʻahu aʻe me nā hana noʻeau ākea, ka hoʻonaʻauao ʻoihana a me ka hoʻonui ʻike ma ke kaiāulu— hōʻaʻano a e hoʻoulu i nā haumāna i ka poʻokela.

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawaiʻi and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide the Koʻolau region of Oʻahu and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

ʻĀina

Windward Community College is located in the ahupuaʻa of Kāneʻohe and Heʻeʻia in the moku of Koʻolaupoko on the island of Oʻahu. Both ahupuaʻa are directly connected to the moʻo ʻōlelo of Pāpa and Wākea, who are seen as the ancestors of the Hawaiian nation. The campus sits beneath the puʻu of Keahiakahoe, which is also connected to many moʻo ʻōlelo of this ʻāina. Because wind names and rain names are associated with specific ʻāina, the rain name of Kāneʻohe is known as the ʻĀpuakea and the rain name of Heʻeʻia is the Ulumano.

Instructor Information

About Your Instructor

Aloha, My name is Jacob Turner and I will be your instructor for this semester as you begin to learn Physics. Some of you may have already had a course in Physics during High School. I do hope you had teachers who breathed passion into the topic and you are excited to learn more. Sadly this is a subject which can be taught in ways that inspire, or in ways that crush a soul. If you suffered through the latter for your former learning endeavors, then I am happy you have given this subject

another chance. I would like to think that I am one of the teachers who can breathe life and passion into learning Physics, but unfortunately this course has been designated as Remote and Asynchronous. This can be problematic for effective learning. I hope to mitigate some of those issues with my course design, but we also have a relatively small class which hopefully allows for more one-on-one opportunities through the semester.

How to Contact Your Instructor

Jacob Turner, Professor, Department of Natural Sciences

Natural Sciences

- Virtual Office: ZOOM: Link here, or email turnerja@hawaii.edu to request a link
- Office Hours: Wednesdays and Thursdays from 11:00am - 12:00pm
    - Office: Hale 'Imiloa 134
    - Office Phone: (808) 236-9111
- Email: turnerja@hawaii.edu

Response time: I generally respond to email and Q&A on business days between 8-5, except during lab times on Wednesdays and Thursdays from 1:30-4:15.

Asking Course Questions

Please use course Q&A in Lamakū Discussions for all general course questions about content, activities, due dates, how work will be graded, etc. I will check Q&A about once per day and provide follow-up information there.

Email specific grading questions and/or personal matters, per FERPA, to keep your information protected. Please use Lamakū Email instead of UH Gmail or other email.

* While Lamakū has an Instant Message feature, I prefer email. Please feel free to use Instant Message to communicate with your CORS 123 classmates if you like.

Alternate Contact Information

If you are unable to contact the instructor, have questions that your instructor cannot answer, or for any other issues, please contact the Academic Affairs Office:

- Location: Alakaʻi 121
- Phone: (808) 235-7422

Contingency Plan

If there is an outage, weather situation, or family emergency on my end, I will do my best to find a way to communicate an update as soon as possible about my return to the course. Mahalo in advance for your understanding and I hope you will do the same.

Course Format & Structure

This course is offered in a 16-week time frame. Please note that this is not a self-paced course; our course schedule is provided in this syllabus.

Asynchronous means that you can choose what time within a given week you engage with the material, but making progress each week is still required. While we are asynchronous and so you don't have a strict time in any given week to work on the material, I do expect that you complete some work EACH week. Physics benefits heavily from practice and exposure, giving your mind time to come to grips with a new perspective. Cramming the course in a limited window near the end of the semester will not be productive for you all.

We are hybrid because testing will be in-person, but through proctoring services at testing centers convenient to yourselves.

- This course is marked as Hybrid in the course description. This is because exams must be taken in person. We will have a midterm exam and a final. For each exam, students are responsible for contacting their nearest testing center and scheduling time to come in for the exam within the 1 week window allocated to the exam.
    - Midterm will be the week of March 1st, and the final exam will be the week of May 10th.
- It is important to be regularly engaging with the material for this course. Each Monday a new module will be posted for the chapter being covered in that week.
    - The content for each week will primarily be reading the chapter in OpenStax. But I will also be releasing explanatory videos to accompany each section of the textbook. The videos are not intended to replace the text, only to supplement it and help put the content in context.
- Each month, students will schedule a one-on-one short session with me to check in on how you are doing in general, and address any questions you have about the course.
- Other than the exams and check-in sessions, the full semester is asynchronous.
- We will be using the free OER textbook OpenStax for the semester to keep student costs down.
    - Physics can be taught in many different ways, and you may find other resources which work better for you personally. I encourage the use of outside resources, and we will have a discussion board set up each week to share what resources you have found useful with your classmates.
    - We will test to see if Padlet works well for this sharing of resources in the first few weeks, falling back on the Lamaku Discussion Boards as a backup plan if needed.

Regular Substantive Interaction (RSI)

Online courses at Windward Community College follow the college's RSI Definition for ensuring quality instruction. You can expect me to communicate with you frequently (and in a timely fashion) about our coursework in the following ways during our 16-week course:

- *Assignments:*

    - Each week there will be about 10 homework problems assigned for you to get practice with the material at hand. I will manually grade the homework within a week after the due date, trying as often as possible to grade the day after the homework is due. Students are encouraged to finish work before the due date so that if they have questions there is time to ask me for guidance or clarification.
- *Q&A:*
    - The *Lamaku* page for the course will include a Q&A section where students can post any questions they have about the course in general. I will respond to questions in the Q&A within 24 hours of the question being posted.
- *Student Check-Ins:*
    - Once per month, students will schedule a 15 minute one-on-one with me for a check-in session. This can involve asking questions about the course content we have covered so far which the student has, to discuss how the semester is going, to talk about what is coming up in the course, or any other topics the student desires.

All course activity due dates are listed in Lamakū on the Calendar. Please check your UH email often and set your Lamakū Notifications (both email and D2L Brightspace Pulse App) to receive course notices, such as grading updates, announcements, and activity reminders. I will keep our Lamakū course Grades as current as possible.

Participation Verification

Campuses are required by federal regulations to verify the participation of students in their classes. In accordance with Executive Policy 7.209, all students in the University of Hawai‘i system are required to establish “participation” to ensure that they are not dropped from their class(es). Effective Fall 2021, students who fail to participate by the late registration period for a class will be administratively dropped from that class. Students may also be dropped from dependent prerequisite and/or corequisite classes if both courses do not establish participation.

Course Information

Catalog Description

This is the second in a rigorous, calculus-based, course in physics for the professional or engineering major. The study of the concepts of physics including the fundamental principles and theories of electricity, magnetism, light, and optical theory.

Pre-Requisites: Credit for MATH 206 or higher or equivalent and a grade of "C" or better in PHYS 170 or consent of instructor.

Co-Requisites: PHYS 272L.

Student Learning Outcomes

Students can expect to attain the following outcomes as a result of taking this course:

1. Demonstrate a solid conceptual understanding of electricity, magnetism, light, and optical theory.
2. Solve applicable problems using calculus and vector analysis.
3. Apply the laws of physics to computational problems in electricity, magnetism, and wave phenomena.

Course Materials

Required

OpenStax University Physics Volume 2. ISBN-13: 978-1-947172-21-0

OpenStax University Physics Volume 3, ISBN-13: 978-1-947172-22-7

- Regular access to a computer with internet (desktop or laptop).
    - Windward has computers, WiFi hotspots, software, and discounts available to students; see Ka Piko Student Tech Support for information.
    - UH Online provides an online learning Readiness Activity and an Orientation to Online Learning that Windward CC students may take to see if online learning is a good fit.

Recommended

- D2L Brightspace Pulse App (free download from app stores)

Lamakū Learning Management System (https://lamaku.hawaii.edu/d2l/home)

- UHCC Lamakū Student Resources (how-to videos)
    - Contact UH ITS for 24/7 Lamakū assistance.
- Keeping Accessibility and UDL in Mind
    - If you find any course content that needs remediation and/or updating, please kindly share and I will immediately work to make the content accessible.
- Lamakū courses will appear 5 days before the first day for the academic term and will become inactive (no longer be available to access) 3 weeks after the end of the term. Be sure to save any coursework you may need from Lamakū *during* the term.
- Lamakū automatically logs you out *if it does not detect activity for three hours*. A warning message will appear, notifying you of the lack of activity. Activity is defined as clicking a button in Lamakū, such as "Save Draft" or "Next" (in a test), clicking on a course tab, or taking an action that sends information to the server.

Other Technology

D2L Brightspace, the parent company of Lamakū, recommends users choose the latest versions of Google Chrome, Mozilla Firefox, Microsoft Edge, or Apple Safari as their internet browser.

We recommend that students update their internet browser at the start of each term, search how to allow pop-up windows, adjust their cookies, and clear device history. Also, fully restart your computer and/or device from time-to-time to optimize performance.

Review the privacy/security policies before using the technologies we will be using in this class. Contact me if you would like to discuss the use of alternate options or technologies.

- Google Drive is UH-provided cloud storage (accessibility statement, privacy policy)
- Google Docs is used to create documents (accessibility statement, privacy policy)
- Google Sheets is used to create assignment and reference worksheets (accessibility statement, privacy policy)
- Google Slides is a presentation authoring software provided by UH (accessibility statement, privacy policy)
- Padlet is used for some of the discussion activities (Padlet Accessibility Statement, Padlet privacy policy)
- YouTube is used for delivering some of the course content (accessibility statement, privacy policy)
- Zoom is used for the Synchronous Sessions and virtual office (accessibility statement, privacy policy)

Grading Policy

There are no extra credit opportunities within the class. Please try to do your best on each assignment from the start of the course, because you never know how much you may struggle with later material, and having a cushion is always beneficial to reduce stress when trying to secure the grade you desire at the end of the course. The lowest 2 homework grades will be dropped from end of semester scores.

Late work will be penalized 2% per day after the due date. This will be a flat reduction of your score by 2% after grading per full day the assignment is late. So if you submit 3 hours after the deadline, there is no penalty. But if you submit 3 days later and score an 84%, your final score is a 78% instead.

Grading Scale

- A final score of 90-100% will be recorded as an A
- A final score of 80-89.9% will be recorded as a B
- A final score of 70-79.9% will be recorded as a C
- A final score of 60-69.9% will be recorded as a D
- A final score below 60% will be recorded as an F

Course Activity	Points/Percentage of Final Grade
Homework	40%

Course Activity	Points/Percentage of Final Grade
Midterm 1 (Chapters 5-10)	15%
Midterm 2 (Chapters 11-15)	15%
Final Exam (Cumulative)	20%
Monthly Check-ins	10%

Assessment, Tasks, and Grading

- Homework:
    - Select Problems from the Textbook will be assigned each chapter for students to complete. Grading is based on process over results, so just writing the final numeric answer is not worth any points. Students must show/explain their reasoning through a problem for full credit. Partial credit will be assigned for successfully completing or setting up parts of the problem so long as the instructor is able to understand the work being done. Legible writing is key, typed submissions are highly encouraged (Google Docs has a very effective equation editor which can handle all of the math we do in the course)
- Midterm 1:
    - During the week of March 1st through the 7th Midterm 1 Examinations will be available through Testing Centers. Contact the testing center to arrange a time to take your exam within that time period.
- Midterm 2:
    - During the week of April 12th through the 18th Midterm 2 Examinations will be available through Testing Centers. Contact the testing center to arrange a time to take your exam within that time period.
- Final Exam:
    - During the week of May 10th through the 16th Final Examinations will be available through Testing Centers. Contact the testing center to arrange a time to take your exam within that time period.
- Monthly Check-ins:
    - Using the STAR Balance system to schedule your time slots, each student must set up a 15 minute on-on-one session with the instructor each month for a general check-in. Failure to schedule a time to meet or failure to attend your scheduled time will result in a loss of 2% of your final grade in the course each time.

Course Schedule

Students may check the Windward Student Notifications page on the website for canceled classes and/or school closures.

Week	Date	Module / Topic	Due Dates
1	1/12/26	***Module 1: Electric Charges*** ● Read/Review/Watch: ○ OpenStax Vol. 2 Chapter 5 ○ Lesson Videos on Lamaku ● Do: ○ Vol. 2 Chapter 5 Problems	1/19/26
2	1/19/26	***Module 2: Gauss's Law*** ● Read/Review/Watch: ○ OpenStax Vol. 2 Chapter 6 ○ Lesson Videos on Lamaku ● Do: ○ Vol. 2 Chapter 6 Problems	1/26/26
3	1/26/26	***Module 3: Electric Potential*** ● Read/Review/Watch: ○ OpenStax Vol. 2 Chapter 7 ○ Lesson Videos on Lamaku ● Do: ○ Vol. 2 Chapter 7 Problems	2/2/26
4	2/2/26	***Module 4: Capacitance*** ● Read/Review/Watch: ○ OpenStax Vol. 2 Chapter 8 ○ Lesson Videos on Lamaku ● Do: ○ Vol. 2 Chapter 8 Problems	2/9/26
5	2/9/26	***Module 5: Current and Resistance*** ● Read/Review/Watch: ○ OpenStax Vol. 2 Chapter 9 ○ Lesson Videos on Lamaku ● Do: ○ Vol. 2 Chapter 9 Problems	2/16/26
6	2/16/26	***Module 6: DC Circuits*** ● Read/Review/Watch: ○ OpenStax Vol. 2 Chapter 10 ○ Lesson Videos on Lamaku ● Do: ○ Vol. 2 Chapter 10 Problems	2/23/26

Week	Date	Module / Topic	Due Dates
7	2/23/26	***Module 7: Magnetic Fields*** ● Read/Review/Watch: ○ OpenStax Vol. 2 Chapter 11 ○ Lesson Videos on Lamaku ● Do: ○ Vol. 2 Chapter 11 Problems	3/2/26
8	3/2/26	***Module 8: Magnetic Sources*** ● Read/Review/Watch: ○ OpenStax Vol. 2 Chapter 12 ○ Lesson Videos on Lamaku ● Do: ○ Schedule and take Midterm 1 Exam ○ Vol. 2 Chapter 12 Problems	3/9/26
9	3/9/26	***Module 9: Electromagnetic Induction*** ● Read/Review/Watch: ○ OpenStax Vol. 2 Chapter 13 ○ Lesson Videos on Lamaku ● Do: ○ Vol. 2 Chapter 13 Problems	3/23/26
10	3/23/26	***Module 10: Inductance*** ● Read/Review/Watch: ○ OpenStax Vol. 2 Chapter 14 ○ Lesson Videos on Lamaku ● Do: ○ Vol. 2 Chapter 14 Problems	3/30/26
11	3/30/26	***Module 8: AC Circuits*** ● Read/Review/Watch: ○ OpenStax Vol. 2 Chapter 15 ○ Lesson Videos on Lamaku ● Do: ○ Vol. 2 Chapter 15 Problems	4/6/26
12	4/6/26	***Module 12: Electromagnetic Waves*** ● Read/Review/Watch: ○ OpenStax Vol. 2 Chapter 16 ○ Lesson Videos on Lamaku ● Do: ○ Vol. 2 Chapter 16 Problems	4/13/26
13	4/13/26	***Module 13: Light*** ● Read/Review/Watch: ○ OpenStax Vol. 3 Chapter 1 ○ Lesson Videos on Lamaku	4/20/26

Week	Date	Module / Topic	Due Dates
		• Do: ○ Schedule and take Midterm 2 Exam ○ Vol. 3 Chapter 1 Problems	
14	4/20/26	***Module 14: Geometric Optics*** • Read/Review/Watch: ○ OpenStax Vol. 3 Chapter 2 ○ Lesson Videos on Lamaku • Do: ○ Vol. 3 Chapter 2 Problems	4/27/26
15	4/27/26	***Module 15: Interference*** • Read/Review/Watch: ○ OpenStax Vol. 3 Chapter 3 ○ Lesson Videos on Lamaku • Do: ○ Vol. 3 Chapter 3 Problems	5/4/26
16	5/4/26	***Module 16: Diffraction*** • Read/Review/Watch: ○ OpenStax Vol. 3 Chapter 4 ○ Lesson Videos on Lamaku • Do: ○ Vol. 3 Chapter 4 Problems	
Finals	5/11/26	• Do: ○ Schedule and take Final Exam	5/15/26

Academic Integrity

Work submitted by a student must be the student's own work. The work of others should be explicitly marked, such as through the use of quotes or summarizing with reference to the original author.

In this class, students who commit academic dishonesty, cheating, or plagiarism will have the following consequence(s):

- Students will receive a failing grade for plagiarized assignments.
- All cases of academic dishonesty are referred to the Vice Chancellor for Student Affairs.

Windward CC Student Conduct Information

UH System Student Conduct Policy EO 7.208

[Include an AI Statement (is it ok in your class? if so, when/how?) Here are some UH AI Recommendations and AI Icons & Sample Statements. Instructors should refrain from sharing or inputting student work into online AI tools, including AI detection tools, without obtaining student

consent. Uploading student work has potential FERPA implications as well as potential copyright concerns. Additionally, the uploaded content could be used as data for AI training without the student's consent.]

Student Kuleana

- Please review our Hawai'i-Style Netiquette, which blends the values of ALOHA with approaches to how we treat each other online.
- [Course-specific expectations]
- Additional classroom policies (e.g., cell phones in the classroom, etc.)
- [Any additional information you feel the student needs to know.]
- [Early College students: your Success Coach at (high school name) is [insert Success Coach name]. They will be enrolled in our course to help support your academic progress.]
- Windward CC has Grievance Procedures in place, but I encourage us to try to work together first to see if we can work through any troubles. Mahalo!

Academic and Technical Support

Academic Support

- Windward Community College Library
- Library eResources
    - [We are lucky to have our very own Windward CC Librarian embedded in our course to help you! Meet [insert WCC Librarian name/link + link to subject matter Lib Guide from the Library Staff Directory page]
- Library Research Units (LRUs)
- Ka Piko Writing Lab
- Ka Piko Speech Lab
- Ka Piko Math Lab
- Online Learning at Windward Community College
- STAR Balance

Technical Support

- UH ITS Help Desk: email help@hawaii.edu or call (808) 956-8883 (or 1-800-558-2669) for Lamakū and most technology support. Available 24 hours a day, 7 days a week, including holidays.
- Student Tech Support: email winhelp@hawaii.edu, call (808) 235-7437, or stop by in person at Hale La'akea 228. Available Monday–Friday from 8:00 am–4:00 pm.

- Lamakū: Click on the Lamakū Help link in the menu bar at the top of the Lamakū homepage to fill out and submit a question and get your answer via email.
- Information Security for Students

College Policies & Support Services

Your instructor may also provide additional resources in your Lamakū course.

Basic Needs

Basic needs include food and housing, childcare, mental health, financial resources, and transportation. Student basic needs security is critical for ensuring strong academic performance, persistence and graduation, and overall student well-being. If you or someone you know is experiencing basic needs insecurity, please see the UH System Basic Needs.

Disabilities Accommodations Statement

Windward Community College's Disability Student Services Office (WCC-DSSO) is committed to providing equal access to qualified students with disabilities.

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to participate fully in this class, you are encouraged to contact the Disability Specialist Counselor, Roy Inouye, to discuss reasonable accommodations that will help you succeed in this class. The Disabilities Counselor can be reached at (808) 235-7448, wccdsso@hawaii.edu, or stop by the office (Hale Kakoʻo 106) for more information.

Financial Aid

If you are receiving financial aid and are contemplating not completing the course it is highly recommended that you contact the Financial Aid Office at (808) 934-2712 or email them at wccfao@hawaii.edu ***BEFORE*** you withdraw to discuss the impact this decision may have on your financial aid eligibility.

LGBTQ+

The University of Hawaiʻi system and Windward Community College are committed to building an inclusive community that supports and advocates for all students, staff, and faculty. We welcome all members of our campus community to our campuses: transgender, māhū, and people of all gender identities. All members of our campus community deserve a work and educational environment free from harassment or bullying based on their sexual orientation, gender identity, or expression. For more information, see the University of Hawaiʻi Commission on LGBTQ+ Equality. Windward Community College Commissioner: Scott Sutherland, scottjks@hawaii.edu

Mental Health Counseling

Mental Health and Wellness at Windward Community College provides counseling services and activities on campus to support students' life goals as well as their academic goals. Information about services can be found at WCC Mental Health & Wellness.

Student Conduct Code

Windward Community College follows the University of Hawai'i Code of Student Conduct which defines expected conduct for students and specifies those acts subject to University sanctions. Students should familiarize themselves with the Code of Student Conduct since, upon enrollment at Windward Community College, they have placed themselves under the policies and regulations of the University and its duly constituted bodies. The disciplinary authority is exercised through the Office of the Vice Chancellor for Student Affairs. Copies of the Student Conduct Code are available at the Office of the Vice Chancellor for Student Affairs.

TRiO Program

The Federal TRiO Programs are educational opportunity outreach programs designed to motivate and support students from disadvantaged backgrounds. TRiO includes six outreach and support programs targeted to serve and assist low-income, first-generation college students and students with disabilities in progressing through the academic pipeline from middle school to post-baccalaureate programs. Information about services can be found at Windward CC TRiO.

Title IX - Sex Discrimination And Gender-Based Violence Resources

Windward Community College 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, gender-based harassment, domestic violence, dating violence, and stalking.

If you or someone you know is experiencing any of these, WCC has staff and resources to support and assist you. To report an incident of sex discrimination or gender-based violence, as well as receive information and support, please contact one of the following:

Desrae Kahale, UH System Confidential Advocate
Phone: (808) 235-7393
Email: advocate@hawaii.edu
Office: Hale Kākoʻo 101

Desrae Kahale, Mental Health Counselor & Confidential Resource
Phone: (808) 235-7393
Email: dkahale3@hawaii.edu
Office: Hale Kākoʻo 101

Mykie E. Menor Ozoa-Aglugub, J.D., Title IX Coordinator
Phone: (808) 235-7468
Email: mozoa@hawaii.edu
Office: Hale Kākoʻo 109

Karen Cho, Deputy Title IX Coordinator
Phone: (808) 235-7404
Email: kcho@hawaii.edu
Office: Hale ʻAlakaʻi 120

As a member of the University faculty, I am required 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.

For more information regarding sex discrimination and gender-based violence, refer to the University's Title IX resources, and the University's Policy, EP 1.204.

UH Alerts

The UH Alert emergency notification system alerts the university community in the event of a natural, health or civil emergency. The information you provide will only be used in the event of an emergency that impacts the health and safety of the UH community or the closure of whole campuses. It will not be shared with others or used for routine UH communications or announcements. To sign up, visit UH Alerts for more information.