



UNIVERSITY of HAWAII
WINDWARD COMMUNITY COLLEGE

Ke Kulanui Kaiāulu o ke Ko'olau

PHYS 152L: College Physics II Lab

Spring 2026

1 Credit | CRN 63435

Windward Community College Mission Statement

'O keia ka wā kūpono e ho'onui ai ka 'ike me ka ho'omaopopo i kō Hawai'i mau ho'oilina waiwai. Aia nō ho'i ma ke Kulanui Kaiāulu o ke Ko'olau nā papahana hou o nā 'ike 'ake akamai a me nā hana no'eau. Me ke kuleana ko'iko'i e ho'ohiki ke Kulanui e kāko'o a e ho'okumu i ala e hiki kē kōkua i ka ho'onui 'ike a nā kānaka maoli. Na mākou nō e ho'olako, kāko'o a paipai i nā Ko'olau a kō O'ahu a'e me nā hana no'eau ākea, ka ho'ona'auao 'oihana a me ka ho'onui 'ike ma ke kaiāulu— hō'a'ano a e ho'oulu i nā haumāna i ka po'okela.

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

Instructor Information

How to Contact Your Instructor

Jacob Turner

Office: Hale 'Imiloa 134 - (808) 236-9111

Office Hours: Wednesdays and Thursdays from 11:00am - 12:00pm

Email: turnerja@hawaii.edu

ZOOM: [Link here](#), or email turnerja@hawaii.edu to request a link

About

Aloha, my name is Jacob Turner. I have been teaching Physics for about 21 years now, and I work within a community called Physics Education Research (PER), who focus on trying to learn how to best teach Physics. I have also spent the last 13 years in charge of introductory Physics labs working on new curriculum for lab courses. I have only just recently started working here at Windward Community College, and am starting the process of evaluating the existing equipment and lab procedures for revision where needed.

For this semester I will mostly continue to utilize the labs which have been done here at Windward in years prior. I have reviewed the documents I found on those labs and they are certainly capable

of helping students to experience Physics in an experimental setup. But some labs lacked proper writeups and much of the existing equipment was not utilized.

Each week we will meet for lab in Imiloa 137. Some weeks I will present you with a datasheet to fill out (how it appears the existing labs primarily function). In those weeks you are responsible for filling out all requested information on the datasheet. Other weeks I will ask for you to maintain a lab notebook. I will walk you all through the requirements of this when we first do so and write up some instructions to refer back to as needed. The idea with the lab notebook is for you to chronicle your thought process as you approach the lab exercise for the week and account for your time on each task.

I will be attempting to put more emphasis on error analysis and propagation than it appears like the labs have done in the past, as communication with the UH Manoa Lab Director has indicated that historically students who take labs at Manoa after having done some lab work at Windward have been behind their peers in this regard.

All communication about lab must take place through University Email. If I ask for students to submit digital work, then it will be turned in through Lamaku. I will respond to all emails within 1 business day. I will return submitted work with feedback within one week of the work being submitted for evaluation, so long as it is turned in on time. I am unlikely to respond to emails after 5pm, but on occasion may do so.

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: Alaka'i 121
- Phone: (808) 235-7422

Course Information

Catalog Description

Experiments in electricity, magnetism, optics, and modern physics.

Pre-Requisites: Credit for or registration in PHYS 152

Student Learning Outcomes

As a result of taking this course, students can expect to attain the following outcomes:

1. Apply the scientific method to physical science systems involving fields of thermodynamics, electricity, magnetism, waves, optics, and modern physics.
2. Collect, report and analyze data obtained in a laboratory setting in a manner exhibiting organization, proper documentation and critical thinking.
3. Manipulate data and apply quantitative techniques, such as graphing and statistical analysis.

4. Demonstrate a basic understanding of the standard instruments used in physics.
5. Identify environmental factors, which affect the outcome of an experiment or observation and apply basic error analyses techniques.

Required Materials

Students must bring to lab a writing implement and something to write on. A minimum of 5 pages of paper should be available for use and submission each week. Students should bring a scientific calculator, and will benefit greatly from having a laptop or other device capable of accessing a graphical analysis tool like Excel or Desmos. For some labs we will use equipment that connects to a computer. Laptops with the required software installed will be available on those weeks, but students who wish to use their own devices instead will be permitted to do so.

Course Format

This is a 16-week course, but we may do have lab exercises all 16 weeks.

This course does require attendance regularly, with attendance/participation making up 25% of your final grade. If we will not be having a meeting on a given week, I will ensure to notify all students at the lab the week before, and attempt to get an announcement placed in Lamaku.

The Lab Experiment each week will have students working with a partner or in a trio (if we have an odd number of students present that week). Working collaboratively with your partner(s) is a mandatory part of the course, and failure to work well with your partner(s) will result in a loss of participation points.

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.

Grading Policy

All lab work is to be submitted before students leave the lab room each week. No late work will be accepted. Students who are still working on the experiment in the last 30 minutes of our class time should stop all experimental work at that time to work on their documentation. The documentation should be getting completed as you proceed through the lab, meaning that even if a fire drill or other event causes us to leave lab early, all students should have some material to submit for evaluations.

Assessment Tasks and Grading

Lab reports are completed according to the instructions given on the handouts distributed each week. Ordinarily, the report consists of a completed data and analysis sheet provided in the handout plus any other appropriate sheet of observed data and graphical analysis. Graphical analysis can be computed using computer software like Excel.

Lab Reports are worth 10 points each. The lowest two (2) lab scores will be dropped.

There is no extra credit available. A grade of Incomplete not be available unless a student has completed enough course material to hold at least a 60% score overall before requesting the Incomplete, and there must be a circumstance outside of the student's control to explain the inability to finish course requirements within the semester.

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

Weekly Assignments

Week	Date	Topic	Due Dates
1	1/14/26	NO LAB (First Week)	1/14/26
2	1/21/26	Calorimetry	1/21/26
3	1/28/26	Boyle's Law & Absolute Zero	1/28/26
4	2/4/26	Thermal Linear Expansion	2/4/26
5	2/11/26	Simple Harmonic Motion	2/11/26
6	2/18/26	Electrostatics	2/18/26

Week	Date	Topic	Due Dates
7	2/25/26	Electric Fields	2/25/26
8	3/4/26	Ohm's Law	3/4/26
9	3/11/26	Circuits	3/11/26
10	3/25/26	No Lab (extended break)	3/25/26
11	4/1/26	AC Circuits	4/1/26
12	4/8/26	Transformers	4/8/26
13	4/15/26	Magnetic Fields	4/15/26
14	4/22/26	Optics	4/22/26
15	4/29/26	Spectrometry	4/29/26
16	5/6/26	Interference of Light	5/6/26
Finals	5/11/26	There will be no Lab Final	

*Bold text denotes a Holiday

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 Responsibilities

- Show up on time and prepared to participate in lab. If materials are available before lab time, review the materials to be fully prepared to start the experiment upon arrival.
- Students may check the [Student Notifications](#) page on the website for canceled classes.

How to Seek Academic or Technical Support

Academic Support

- [Windward Community College Library](#)
- [Library eResources](#)
- [Ka Piko Writing Lab](#)
- [Ka Piko Speech Lab](#)
- [Ka Piko Math Lab](#)
- [Evening and Online Learning at Windward Community College](#)
- [STAR Balance](#)

Technical Support

- [UH ITS Help Desk](#) – email help@hawaii.edu or call 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

Disabilities Accommodations Statement

The 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 Kako'o 106) for more information.

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. Here is their contact info: <https://windward.hawaii.edu/trio/>

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 website](#).

Mental Health Counseling

Mental Health and Wellness at Windward Community College counseling services and activities on campus to support students' life goals as well as their academic goals. Information about services can be found at the [WCC Mental Health & Wellness website](#).

LGBTQ+

The University of Hawai'i 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. University of Hawai'i Commission on LGBTQ+ Equality at their website: <http://www.hawaii.edu/offices/president/lgbtq/> Windward Community College Commissioner: Scott Sutherland, scottjks@hawaii.edu

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 website](#) for more information.

Financial Aid

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

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, the student has placed herself/himself 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 or [online](#).

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 Kāko'o 101

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

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

Karen Cho, Deputy Title IX Coordinator

Phone: (808) 235-7404
Email: kcho@hawaii.edu
Office: Hale 'Alaka'i 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, the University's Title IX resources, and the University's Policy, Interim EP 1.204, go to manoa.hawaii.edu/titleix/