Syllabus

Course:	152L, Section 003, E&M, Fall 2020
TA:	Dorian Daimer
Email:	ddaimer@hawaii.edu
Office Hours:	Mondays 3-4pm and Thursdays 1:30-2:30pm, starting Aug 31 via Zoom
	Join Zoom Meeting https://zoom.us/j/91015986874
	Meeting ID: 910 1598 6874 Passcode: Faraday
Website:	http://go.hawaii.edu/ATC
Text:	The lab manual can be downloaded from the website listed above.

Mode of Instruction:

- Mostly asynchronous online, with synchronous office hours.

Student learning outcomes:

- To understand the importance of experiments as the basis of the scientific method.
- Better understand physics concepts covered in lecture by seeing their application in experiments.
- To obtain experience in the techniques employed by scientists in all fields for analyzing data and drawing conclusions from "real world" experiments.
- Report your result in a scientific fashion.

What to expect:

- Every week one worksheet will be assigned. This worksheet relates to one (sometimes two) chapters of the laboratory manual. The questions on the worksheet ask about the theory, experimental setup and procedures, and data analysis.
- To answer the worksheets, it is expected that the students read the laboratory manual. In addition, videos explaining the theoretical background and the experimental procedure will be uploaded to the course website.
- Also on the course website, the students will be provided with the data recorded in the experimental video.
- For most weeks, the worksheet will also contain a component with instructions for running a virtual experiment in the web browser, followed by questions.
- Each student has to submit solutions to the worksheets for all experiments. Please see the rules for late submissions below.

Worksheet:

Each worksheet will have questions on the following:

- Objective of the experiment
- Theory behind the experiment
- Experimental procedure
- Data analysis
- Discussion and conclusion
- Questions on the virtual experiments.

Please see dates for assignment and due dates below. The solution should be prepared as a typed out document and submitted on laulima as a pdf:

- Start with writing the experiment's title.
- List the date you are writing the solution.
- Use the titles and subtitles from the worksheet to structure the solution.
- Data analysis:
    - Conduct the data analysis in SciDAVis:
        - Make sure all axes have labels.
        - Make sure all axes have units.
        - Make sure graphs have titles.
        - Make sure graphs have error bars.
    - Calculations
        - Show all non-trivial calculations.
        - Show all error propagation calculations.
        - Make sure all calculations have units.
        - It is okay to handwrite the calculations. However, these handwritten calculations have to included in your typed report in a reasonable way:
            - Scan or take a high-resolution, well-lit photo of the handwritten calculation.
            - Crop the photo and insert into the solution document.
            - Assure that the inserted image has a high enough resolution and is not blurry.
            - Assure that the font size of the insert handwritten solution is roughly the same as the rest of the document.
            - Illegible handwritten parts will be marked as zero.
- Worksheets have to be submitted on Laulima as a single **pdf** file. Typical text processing software should be used (word, libreoffice, google doc). The pdf file needs to be submitted before the deadline date.
- Penalties for late worksheets:
    - 1 week late – 15% off
    - more than 1 week late → **The solution will not be accepted and will count as 0%.**

Grading:
Final grades will be curved over all sections. The typical outcome over all sections is approximately 25% A, 40% B, 35% C and below. Every experiment carries the same weight for the grade calculation.

Office hours:
Every week, the teaching assistant will offer at least 1h of online office hours via zoom. Active participation is expected. The teaching assistant assigns up to 0.5% of extra credit on the total score for every office hour where a student participates actively. Active participation is defined as asking either relevant questions on theory or experiment or answering questions that other students or the teaching assistant asked.

Cheating:
- No cheating and copying is allowed.

- Every student has to submit their own solution.
- A student who was caught cheating would be given a zero for that lab/quiz (may also lead to a direct failure of the course).
- Cheating incidents will be reported to the Office of Judicial Affairs.

Missed Worksheet Submissions:

- To receive full credit, a student must inform (email or call) his/her TA before or immediately after missing a submission deadline.
- If the TA was not contacted on the same day and the student cannot produce a doctor's note or any other evidence no late worksheet submission will be accepted. In this case, the student receives 0% for the experiment.
- **Only one worksheets submission can be missed.** A second missing worksheet will result in failing the course.

Schedule:

Week start	Due date	Experiment
8/31	9/4	Simple Electric Circuit with a LED
9/7	9/11	Electric Field Mapping
9/14	9/18	Measuring Electric Deflection with a Cathode-Ray Tube
9/21	9/25	Operation of an Oscilloscope
9/28	10/2	Ohm’s and Kirchhoff’s Laws
10/5	10/9	Capacitor
10/12	10/16	Magnetic Field Mapping
10/19	10/23	Charge-to-Mass Ratio of Electrons
10/26	10/30	Inductor
11/2	11/6	Natural Oscillations with an RLC Circuit
11/9	11/13	Driven Oscillations with an RLC Circuit
11/16	11/20	Snell’s Law and the Lensmaker’s Equation

The University of Hawai‘i 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, 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.

Here are some of your options:

Anonymous and Confidential

If you wish to remain Anonymous, speak with someone Confidentially, or would like to receive information and support in a Confidential setting, contact the confidential resources are available at www.manoa.hawaii.edu/titleix/resources/#confidential

or

If you wish to remain Anonymous, speak with someone Confidentially, or would like to receive information and support in a Confidential setting, contact:

Lesbian, Gay, Bisexual, Transgender (LGBT) Student Services

Lesbian, Gay, Bisexual, Transgender and Intersex (LGBTI) Student Services strives to maintain a safe and inclusive campus environment that is free from harassment and discrimination. The office provides direct services to students of the University of Hawai‘i at Mānoa to confidentially discuss or seek advocacy and support for mistreatment due to their actual or perceived sex, gender identity, gender expression, or sexual orientation.

Camaron Miyamoto
Queen Lili‘uokalani Center for Student Services, Office 211
2600 Campus Road
Honolulu, HI 96822
(808) 956-9250
email: lgbtq@hawaii.edu
web: http://manoa.hawaii.edu/lgbt/

Office of Gender Equity

The Office of Gender Equity offers direct services to victims and survivors of sexual harassment and sexual assaults. Brief descriptions of services offered are available here.

Jenna Friedman
Queen Lili‘uokalani Center for Student Services, Office 210
2600 Campus Road
Honolulu, HI 96822
(808) 956-9499
email: geneq@hawaii.edu
web: manoa.hawaii.edu/genderequity

Prevention, Awareness, and Understanding (PAU) Violence Program

Prevention, Awareness, and Understanding (PAU) Violence Program exists to inspire, educate, and empower students and campus communities to build safe living-learning environments, end interpersonal violence, and encourage holistic well-being in ways that are supportive, collaborative, student-centered, and strengths-based. PAU Violence Program staff provides direct services to all University of Hawai‘i at Mānoa students including crisis response, safety planning, academic support, and referrals to campus and community resources.

Jennifer Barnett Leslie Cabingabang
Queen Lili‘uokalani Center for Student Services, Office 211
2600 Campus Road
Honolulu, HI 96822
(808) 956-8059
email: uhmpau@hawaii.edu

Student Parents At Mānoa (SPAM)

Student Parents At Mānoa (SPAM) seeks to increase the visibility of and resources for student parents at UH Mānoa as they pursue education while parenting. SPAM staff provide advocacy, support, and referrals for pregnant and parenting students to help them succeed in their educational goals.

Teresa Bill
Queen Lili'uokalani Center for Student Services, Office 211
2600 Campus Road
Honolulu, HI 96822
(808) 956-8059
email: gotkids@hawaii.edu
web: manoa.hawaii.edu/studentparents/

Counseling and Student Development Center (CSDC)

The Counseling and Student Development Center (CSDC) offers support to UHM students, staff, and faculty to assist with personal, academic, and career concerns. All services are confidential and most are free of charge for Mānoa students. They also offer free consultation to faculty and staff on personal and student-related issues as well. CSDC office hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday. They also offer immediate walk in appointments for urgent or emergency/crisis services during their regular daily hours.

Queen Lili'uokalani Center for Student Services, Office 312
2600 Campus Road
Honolulu, HI 96822
(808) 956-7927
email: uhmcsdc@hawaii.edu
web: www.manoa.hawaii.edu/counseling/

University Health Services Mānoa (UHSM)

The University Health Services Mānoa (UHSM)is staffed by physicians, nurse clinicians, nurses, and other support staff, and offers a wide range of medical services and programs to UH Mānoa students, with many of the services also available to UH Mānoa faculty and staff and students from other UH campuses. Services include general medical care on a walk-in basis; women's health, sports medicine, psychiatry, and dermatology clinics by appointment; pharmacy and clinical laboratory; and student training, employment and volunteer opportunities.

1710 East West Road
Honolulu, HI 96822
(808) 956- 8965
hawaii.edu/shs/
Reporting

If you wish to Report an incident of sex discrimination or gender-based violence including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence or stalking as well as receive information and support, contact:

Dee Uwono
Director and Title IX Coordinator
Hawai'i Hall, Office 124
2500 Campus Road
Honolulu, HI 96822
(808) 956-2299
t9uhm@hawaii.edu

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 www.manoa.hawaii.edu/titleix/