

GENERAL PHYSICS II

PHYS 272

2025 Spring

Instructor:	Alex Dvornikov	Time (Sec 1):	TR 9:00 – 10:15 am
Email:	olexiy@hawaii.edu	Time (Sec 2):	TR 10:30 – 11:45 am
Office:	WAT 433	Place:	WAT 112

Welcome! We will explore electricity & magnetism, circuits, and light.
I hope that you will see the profound importance and ubiquity of physics and have fun.

Schedule: The tentative schedule and test dates are on the next page.

Labs: Labs are independent of the lectures and start the second week of the semester.
[Here](#) is a link with the details, FAQs, and the lab TA office hours.

Recitations: Optional but *highly suggested*. Led by a physics graduate student, Marvin Schwickert.
Guided one-hour problem-solving sessions on Tuesdays 3 - 4 pm, 4 - 5 pm and Thursdays 12 - 1 pm at Keller Hall Room 302.

Help Hours: W 4:30 - 6 pm at MSB 303, R 3 - 4:30 pm at KELL 414.

Textbook: Young & Freedman, *University Physics 15th Ed.* Ch. 21 – 34.
You already have digital access by registering for this course. Do **not** pay again.
For access instructions, please, see the *Pearson* document in the Resources folder on Laulima.

Grading: Homework (45%), Quizzes (10%), Test 1 (15%), Test 2 (15%), Final (15%).
Your overall grade will be curved. The final exam may also be chosen to constitute the entire grade.

Homework: Written assignments. Upload submissions to Assignments folder.

Quizzes: Pop quizzes in class. Lowest score dropped.

Tests: There will be two tests (**Feb. 20, Apr. 10**) and a final.
Final (Sec 1): May 13, Tuesday, 9:45 - 11:45 am.
Final (Sec 2): May 15, Thursday, 9:45 - 11:45 am.

Extra Credit: Up to 5%.

Option 1 (Experiments): [Penny battery](#) or [homopolar motor](#) or [Blue Sky](#) or [Critical Angle](#) - 2.5%.
Pick one and upload photos (or video links) in the Assignments folder.
Penny battery/homopolar motor deadline - **Apr. 13**.
Blue sky/Critical Angle deadline - **May 4**.

Option 2 (Seminars): Attend a Physics or Astronomy seminar (announced [here](#) and [here](#)) - 2.5%.
Take a picture of the first and last slides and handwrite at least two pages of notes (bullet points OK).
Submit the notes in the Assignments folder by **May 4**.

Academic Honesty: All incidents will be reported to the department chair and dean. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation.

Tentative Schedule

Week 1 (Jan. 14, 16): Ch. 21 – Electric Charge & Electric Fields

Week 2 (Jan. 21, 23): Ch. 22 – Gauss's Method

Week 3 (Jan. 28, 30): Ch. 23, 24 – Electric Potential, Capacitance & Dielectrics

Week 4 (Feb. 4, 6): Ch. 25 – Current, Resistance, Electromotive Force

Week 5 (Feb. 11, 13): Ch. 26 – Direct Current Circuits

Week 6 (Feb. 18, **20 - Test 1**): Ch. 21-26 Review

Week 7 (Feb. 25, 27): Ch. 27 – Magnetic Fields & Magnetic Forces

Week 8 (Mar. 4, 6): Ch. 28 – Sources of Magnetic Fields

Week 9 (Mar. 11, 13): Ch. 29 – Electromagnetic Induction

Spring Recess (Mar. 17 - 21)

Week 10 (Mar. 25, 27): Ch. 30 – Inductance

Week 11 (Apr. 1, 3): Ch. 31 – Alternating Current

Week 12 (Apr. 8, **10 - Test 2**): Ch. 27-31 Review

Week 13 (Apr. 15, 17): Ch. 32 – Electromagnetic Waves

Week 14 (Apr. 22, 24): Ch. 33 – The Nature and Propagation of Light

Week 15 (Apr. 29, May 1): Ch. 34 – Geometric Optics

Week 16 (May 6, **8 - No Class**): Ch. 32-34 Review

Finals Week

Final (Sec 1): May 13, Tuesday, 9:45 - 11:45 am.

Final (Sec 2): May 15, Thursday, 9:45 - 11:45 am.