

## PHYS 272 (SECTION 1): SPRING 2020

**Class Meetings:** MWF 900-950, STB 225

**Text:** University Physics, vols. 2 and 3, Open Stax (<https://openstax.org/subjects/science>)

**Office hours:** MWF 1030-1130 or by appointment

**Instructor:** Prof. Philippe Binder, STB 217, Tel. 932-7196, [pbinder@hawaii.edu](mailto:pbinder@hawaii.edu)

**Spring Break:** March 16-20

**Final exam:** May 11 (M) 730-930 am.

Welcome to General Physics II, a calculus-based course that treats electricity, magnetism and optics. This course is aimed at physics and astronomy majors, plus well-trained students in the life and physical sciences. I consider it rigorous.

The emphasis of the course is on problem solving - you will typically be assigned and tested on intermediate difficulty problems comparable to, but not identical to those in your text. My interest is for as many people as possible to learn the material competently and do well in the class.

### Grading:

2 tests and the final exam count 30% each. A sample of your homework will be graded in the recitation section (10%). I will apply the standard scale (A=90-100, B=80-89, C=70-79, D=50-69, F=0-50), with a small amount of "curving" possible at the end. I use plus and minus grades near the cutoffs.

### PROGRAM

Lectures	Dates	Text chapters	Topics
1-5	13Jan-24Jan	UP2: 5-6	Electric charges and fields; Gauss's law
6-10	27Jan-5Feb	UP2: 7-8	Electric potential; capacitance
11-15	7Feb-19Feb	UP2: 9-10	Current; resistance; direct current circuits
16-17	21Feb- <b>24Feb</b>	UP2: 5-10	Review; <b>Test</b>
18-22	26Feb-6Mar	UP2: 11-12	Magnetic forces, fields and sources
23-27	9Mar-25Mar	UP2: 13-14	Electromagnetic induction; inductance
28-32	27Mar-6Apr	UP2: 15-16	Alternating current circuits; electromagnetic waves
33-34	8Apr- <b>10Apr</b>	UP2: 11-16	Review; <b>Test</b>
35-39	13Apr-22Apr	UP3: 1-2	The nature of light; geometric optics
40-44	24 Apr-4May	UP3: 3-4	Interference; diffraction
45	6May	Cumulative	Review

Current, up to date statements regarding Disability Services, Advising, Academic Integrity, Kilohana Academic Success, Student Conduct, Mental Health, Students of Concern, and Title IX/EEO can be found at the following links:

**[Short link \(Google Document\)](http://go.hawaii.edu/zAf)** <http://go.hawaii.edu/zAf>

**[Mobile friendly link \(HTML\)](http://go.hawaii.edu/GQe)**: <http://go.hawaii.edu/GQe>