

PHYSICS 272
GENERAL PHYSICS II

SPRING 2016 / Monday, January 11 – Friday, May 13

Last Day of Instruction / Wednesday, May 4

Watanabe Hall 420 / MWF, 8:30 AM - 9:20 AM

Instructor

Dr. Chester Vause

Professor, Department of Physics & Astronomy

Watanabe Hall 434, 808-956-2989, cvause@hawaii.edu

Office Hours: See instructor after class to make an appointment.

Prerequisites

Phys 151 or Phys 170, and Math 242 or 252A (or Math 216 with consent). Vector Calculus is used extensively.

Textbook (Required)

University Physics, Volume 2 (13th edition), Hugh Young and Roger Freedman (Pearson Addison Wesley, 2012)

Textbook Chapters

Selected topics in textbook chapters:

21, 22, 23, 24	Electrostatics
25, 26	Steady Electric Current
27, 28	Magnetostatics
29, 30, 31, 32	Time-Dependent Electromagnetism
33, 34	Optics

Omitted sections in chapters to be announced in class.

Student Learning Outcomes

Among the student learning outcomes of this course are the abilities to:

- (a) Describe the interplay between experimental observations and mathematical models in the development of the physical theory of the universe
- (b) Understand the origin and necessity of Maxwell's Equations in order to explain Electromagnetism
- (c) Gain experience using mathematical methods such as vector calculus, differential equations and complex variables in the solution of Electromagnetic problems
- (d) Introduce the concept of dynamical vector fields in physics

Suggested Problems and Tutoring

Suggested problems will be assigned but not collected or graded. Some problems will be worked-out in class. Tutoring centers are available in Watanabe Hall, Room 421, and Bilger Hall Learning Emporium, Room Bil A 209. Check the schedules at these locations for available times.

Exams

Exams are closed-book, two student-generated note pages per new material (2 for Exam 1, 4 for Exam 2, 6 for Exam 3, 8 for Final Exam), and scientific calculator, only. No internet devices or electronic storage media. Exam dates are:

Exam 1	Friday	February 12, 2016
Exam 2	Friday	March 11, 2016
Exam 3	Friday	April 15, 2016
Final Exam	Friday	May 13, 2016, 7:30AM-9:30AM

Each Exam (including the Final Exam) is based on material covered since the previous Exam. Each Exam is worth 25% of the final grade total score:

$$\text{TOTAL SCORE}(\%) = 25\%(\text{EX1}(\%) + \text{EX2}(\%) + \text{EX3}(\%) + \text{FNL}(\%))$$

Grade Scale

Letter grade is determined from the total score according to the following scale:

A- (86%-90%)	A (91%-95%)	A+ (96%-100%)
B- (61%-70%)	B (71%-80%)	B+ (81%-85%)
C- (31%-40%)	C (41%-50%)	C+ (51%-60%)
	F (0%-20%)	D (21%-30%)

NO INCOMPLETE GRADE GIVEN

NOTICE

Be prepared to take the tests in-class as assigned. This is not negotiable. If you have time conflicts, decide if this course is your first priority. I do not “work around” student’s personal plans and schedules (work, travel and otherwise).

This course is a lecture format. If you come to class, plan to stay. Excessive coming and going will not be tolerated. If you are late, enter quietly through the back door. Do not disturb the class.

No electronic recording and no electronic storage of any kind (photography, video, electronic writing pads, etc.) of lectures and lecture board writing. Your focus is to take conventional “pencil and paper notes.”

No internet devices (electronic smart phones, pads/tablets, computers, etc.). Turn off your wireless telephones, etc., and PUT THESE AWAY. Do not attend to these during class (no texting, etc.) as such behavior is distracting to the instructor and your classmates. This restriction includes electronic books/textbooks.