

# Phys 272-001. General Physics II Fall 2009

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**Time:** MWF 8:30-9:20  
**Place:** WAT 112  
**Instructor:** Luis Elias (956-2961) [lelias@hawaii.edu](mailto:lelias@hawaii.edu)  
**Office Hours:** MWF 10:00-11:00

**Course Description:** Electromagnetism and Geometric Optics.

**Pre-requisites:** PHYS 151 or PHYS 170 and MATH 242 (Calculus II) or MATH 252A (Accelerated Calculus II), MATH 216 with consent of the instructor.

**Textbook:** University Physics Volume 2. Young and Freedman, 12<sup>th</sup> edition.

**Course Content** Chapters 21-24 of textbook.

## **Student Learning Outcomes:**

1. Understand the fundamental laws of electromagnetism. Among these are the laws of: Coulomb, Gauss, Ampere and Faraday.
2. Apply these laws to solve simple electric and magnetic problems, including: (a) description of sources of the electromagnetic field; (b) electromagnetic properties of vacuum and simple materials; (c) calculation in direct and alternating current circuits; (d) electric capacitance and magnetic inductors; (e) properties of electromagnetic waves.

**Homework:** Weekly homework using Mastering Physics Web Problems ([www.masteringphysics.com](http://www.masteringphysics.com)). (60% of final grade)

**Midterm exams:** Two midterms (30% of final grade)

**Final exam:** (10 % of final grade)