

Principles of Physics II

Waves and Optics, Electricity and Magnetism, and Relativity and Quantum Physics

Course Objectives

To help students develop (i) a good understanding of fundamental physical principles and (ii) skills to solve real-world physical problems associated with the topics. Lectures will include basic principles illustrated with examples. Students are expected to attend lectures, and spend time reading the textbook and solving problems from the textbook to develop a strong understanding of the physical principles.

Location and Time

Aderhold Learning Center 223 (MWF, 10 AM - 10:50AM)

Aderhold Learning Center 329 (MW, 1:30 PM - 2:45 PM)

Instructor

[Dr. Mukesh Dhamala](#)

Office: Science Annex, Room #456

Phone: (404) 413-6043

Email: mdhamala@gsu.edu

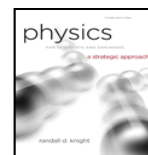
Web: <http://www.phy-astr.gsu.edu/dhamala/dhamala.html>

Office hours: Monday and Wednesday: 11 - noon

Textbook

Physics for Scientists and Engineers by Randall D. Knight (3rd Edition)

(Chapters: 20-35, selected chapters from 36- 42)



Laboratory

Please follow the information from this website: <http://www.phy-astr.gsu.edu/butler/labs/index.html>

Grading

Final Grade = 75% (Lecture) + 25% (Laboratory)

75% (Lecture) = 15% (homework) + 10% (reading and class quizzes) + 30% (2 Tests)
+ 20% (Final Exam)

Letter Grades: A= 4.0, A-, B+, B= 3.0, B-, C+, C=2.0, C-, D=1.0, F =0.0

(x+/- =x +/-0.33)

Reading Quizzes and Homework

Reading quizzes and homework assignments will be posted online and graded by using MasteringPhysics-system. You will need to register in [MasteringPhysics](http://www.masteringphysics.com/) (<http://www.masteringphysics.com/>). To do this, you need to know your ACCESS CODE which is included with your textbook, or can be obtained online from the publisher. To enroll in this course, here is the ID you will need: **MPDHAMALA2014**

Class Quizzes

There will be a short in-class quiz anytime during a lecture. You will be graded for your efforts, participation and correct responses.

Test I & II (in-class)

Feb 26 (adjusted) and April 7 (adjusted)

Final Exam

May 5, 8:00-10:30 AM (for MWF 10 am class).

April 30, 1:30-4:00 PM (for MW 1:30 pm class).

Disability Services

Students who wish to request accommodation for a disability may do so by registering with the Office of Disability Services of a signed Accommodation Plan and are responsible for providing a copy of that plan to instructors of all classes in which an accommodation is sought.

Honor code

It is the responsibility of the students to abide by the [GSU academic honesty policy](#).

Course evaluation

Constructive assessment of this course from students plays an indispensable role in shaping education at Georgia State. Upon completing the course, students are requested to fill out the online course evaluation.

Approximate Schedule for Topics from Chapters 20-36

Please see also [GSU academic calendar](#).

Week	Chapter	Contents
1	Chapters 20	Traveling Waves
2	Chapters 21	Superposition
3	Chapters 22	Wave Optics
4	Chapters 22	Wave and Ray Optics
5	Chapters 23	Ray Optics
6	TEST I	Chap 20 -- Chap 23
7	Chapter 24	Optical Instruments
March 17 - 23	Spring Break	Spring Break
8	Chapter 25, 26	Electric Charges and Forces, Field
9	Chapters 27, 28	Gauss's law, Electric Potential
10	TEST II	Chap 24-- Chap 28
	Chapters 29, 30	Potential and Field, Current and Resistance
11	Chapters 31	Fundamental of Circuits
12	Chapters 32	Magnetic Field
13	Chapters 33	Electromagnetic Induction,
14	Chapters 34, 35	Electromagnetic Fields and Waves, AC Circuits
May 5 April 30	8:00-10:30 AM (Final Exam for MW-class) 1:00-4:00 PM (Final Exam for MW-class)	Week for Final Exam

Approximate % Scale for Letter Grades

97 > 91 > 87	A+ > A > A-
87 > 81 > 77	B+ > B > B-
77 > 71 > 67	C+ > C > C-
60 - 67	D
< 60	F