

General Physics II – Fall 2016
PHY 162 - 003

Instructor	Dr. Mani Pokharel
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Office hours	Tuesdays and Thursdays 1:00 pm – 3:00 pm; or by appointment

Text: *Fundamental of Physics, 9th edition* by Halliday, Resnick, and Walker

Class Material: Text, student workbook/portfolio and scientific calculator

Pre-requisite: PHY 161

Co-requisite: MAT 192

Lecture: MWF, 12:00 – 12:50, room: SEB 143

Lab: Thursday, 3:05 – 5:45, room: SEB 214

Course Description

This is the second semester course of a two-semester sequence in calculus-based Introductory Physics. Topics covered include Oscillations, Waves and Optics, Electric Charges, Electric Fields, Gauss' Law, Electric Potential, Capacitance, Current and Resistance, Circuits, Magnetic Fields and electromagnetic phenomena.

Topic-specific Learning Outcomes

By the end of the session, students will be able to

- Describe a wave motion using basic physics.
- Apply elementary principles of physical and geometrical optics.
- Understand and apply conservation laws to analyze motion of charges in electric and magnetic fields.
- Describe the nature of electromagnetic phenomena.
- Develop critical thinking and problem solving skill.

Course Structure (Lecture)

Homework: There will be one or two homework sets per chapter consisting of end of chapter problems from your textbook. You are encouraged to work together on the homework, but each person must work and submit his/her own homework. Don't rely on your classmates so much that you cannot solve problems by yourself on tests or exams. I do not expect you to get perfect scores on new material, but I do expect you to try hard. Keep a detailed note of your work (i.e., your portfolio) which would be useful in preparing for tests and exams. If you have trouble with homework, come see me during office hours.

Midterm Tests: There will be three midterm tests in this session. Each test will be approximately 50 minutes in length. Date and time of the tests can be found in the tentative schedule presented on the last page of this syllabus. For a missed midterm test, an official excuse letter will be required to set up a make-up test.

In-class Quizzes: Each Friday, we will start our class with a 15 – 20 minutes quiz. These quizzes will have both conceptual and problem solving type questions based on material from the lecture. If you miss a quiz you will receive no credit. There are no make-up quizzes. The lowest quiz grade will be dropped at the end of the semester.

Final Examination: There will be a cumulative final exam at the end of the semester. It will be structured like the midterm tests but it will be approximately twice as long. Refer to the schedule on the last page for detail information on date and time of final examination.

Course Structure (Lab)

We will meet once a week for lab work. You will be working in group of two or three. You will have to work with each other to manage your work on each lab. Each member is responsible for the content of the lab report, but only one report will be submitted per group. A print out of lab instructions will be provided to each group during the lab. You can also access the lab instructions, worksheets and guidelines for lab report by clicking “Physics Lab Homepage” button of physics department website. The following format is recommended for a lab report and should be adhered to closely unless instructed otherwise. Report should be **typed**. (i) Title – 5 % (ii) Abstract – 10 % (iii) Theory – 25 % (iv) Experimental Procedure – 20 % (v) Results and discussion – 30 % (vi) Conclusions – 10 %

Final Grade Breakdown

Your final grade is calculated based on five parts, weighted appropriately.

Homework – 5 %

In-class Quizzes - 10 %

Midterm tests - 50 %

Final Exam – 20 %

Lab Reports – 15 %

Letter Grade	A	B+	B	C+	C	D	F
Percentage	89.5-100	86.5-89.4	79.5-86.4	76.5-79.4	69.5-76.4	59.5-69.4	0 - 59.4

If you received a failing grade during the course, you are urged to arrange a meeting with me and discuss the work/assignment in question.

Attendance

Attendance is not mandatory but you are expected to attend each class. Failure to attend class on the day an assignment is assigned or is due does not mean that you may turn in a late assignment without penalty. If you miss class for an excusable reason the day assignments or new test dates are announced, it is your responsibility to find out about it. So, please come to every class, participate, take good notes, read the book, and do the problems.

Documented Disability Statement

Students requiring accommodations for a disability should inform the instructor at the close of the first class meeting or as soon as possible. The instructor will refer you to the Disability Support Services Coordinator to document your disability, determine eligibility for accommodations under the ADA/Section 504 and to request a Faculty Accommodation Form. Disability accommodations or status will not be indicated on academic transcripts. In order to receive accommodations in a class, students with sensory, learning, psychological, physical or medical disabilities must provide their instructor with a Faculty Accommodation Form to sign. Students must return the signed form to the Disability Services Coordinator. A new form must be requested each semester. Students with a history of a disability perceived as having a disability or with a current disability who does not wish to use academic accommodations are also strongly encouraged to register with the Disability Services Coordinator and request a Faculty Accommodation Form each semester. For further information, please contact Carole Burrowbridge, Disability Services Coordinator, at 301-2778 or visit the Disability Support Services website. <http://www.mercer.edu/studentaffairs/disabilityservices>

Electronic Submission of Assignment

Students bear sole responsibility for ensuring that papers or assignments submitted electronically to a professor are received in a timely manner and in the electronic format(s) specified by the professor. Students are therefore obliged to have their e-mail client issue a receipt verifying that the document has been received. Students are also strongly advised to retain a copy of the dated submission on a separate disk.

Electronic Devices Usage

Out of courtesy for all those participating in the learning experience, all cell phones and pagers must be turned off before entering the classroom and lab.

Classroom Code of Conduct

All students are expected to participate in a positive manner and follow the Mercer honor code. The most important rule is to respect others in the class and make positive contributions to the learning environment. All suspected violations of the University Honor Code will be forwarded to the Honor Council.

Tentative Schedule (Lecture)

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1 Aug 22 - 26			First day of class Ch. 15		Ch. 15 Contd.
Week 2 Aug 29 – Sept 2	Ch. 15 Contd.		Ch. 15 Contd.		Ch. 16

Week 3 Sept 5 - 9	Labor Day		Ch. 16 Contd.		Ch. 16 Contd.
Week 4 Sept 12 - 16	Ch. 17		Ch. 17 Contd.		Ch. 17 Contd./Midterm 1
Week 5 Sept 19 - 23	Ch. 21		Ch. 21 Contd.		Ch. 21 Contd.
Week 6 Sept 26 - 30	Ch. 22		Ch. 22 Contd.		Ch. 22 Contd.
Week 7 Oct 3 - 7	Ch. 22 Contd.		Ch. 23	Fall Break	Fall Break
Week 8 Oct 10 - 14	Ch. 23 Contd.		Ch. 23 Contd.		Midterm
Week 9 Oct 17 - 21	Ch. 24		Ch. 24 Contd.		Ch. 24 Contd.
Week 10 Oct 24 - 28	Ch. 25		Ch. 25 Contd.		Ch. 25 Contd.
Week 10 Oct 31 - Nov 4	Ch. 26		Ch. 26 Contd.		Ch. 26 Contd.
Week 11 Nov 7 - 11	Ch. 27		Ch. 27 Contd.		Ch. 27 Contd.
Week 12 Nov 14 - 18	Midterm		Ch. 28		Ch. 28 Contd.
Week 13 Nov 21 - 25	Ch. 28 Contd.		Thanksgiving Break	Thanksgiving Break	Thanksgiving Break
Week 13 Nov 28 - Dec 2	Ch. 29		Ch. 29 Contd.		Ch. 29 Contd.
Week 14 Dec 5 - 9	Ch. 30		Ch. 22 Contd.		Last day of class (Review)
Week 15 Dec 12 -16	Finals	Finals	Reading Day	Finals	Finals