

MERCER COUNTY COMMUNITY COLLEGE
Science and Health Professions

COLLEGE PHYSICS II
PHY 102
Lecture Hours 3
Lab Hours 3
Credits 4

Dr. Huang
Prof. Dimas
Dr. Ganesh

Course Description

This is the second part of a two-semester sequence of algebra-based physics. Topics include electricity, magnetism, atomic physics, and nuclear physics. Algebra and trigonometry are applied throughout the course.

Prerequisites/Co-requisites

Prerequisite: PHY 101 & MAT 115; Co-requisite: MAT 116.

Student Learning Outcomes

1. Students will be able to gain knowledge of a broad introduction to physics at the beginning college level.
2. Students will be able to develop physical intuition and problem-solving skills.

Course Materials

A text book is required for the lecture, laboratory, as well as the homework.

Required textbook: Serway and Vuille: College Physics, volume II, 8th Edition
Publisher: Thompson-Brooks-Cole

Recommended Laboratory Manual: Cioffari: Experiments in College Physics, 10th Edition
Publisher: D.C. Heath

Course website includes course information. <http://www.mccc.edu/~huangj/>

Mercer email will be used to enhance the communication for the course. Please check regularly.

Calculator with trigonometric functions is required for lecture, laboratory and tests. Calculators CAN NOT be shared during any test.

Use of cell phone during class or any test/quiz in any manner is considered disruptive to class and may results in 2% lower grade. The instructors are responsible to maintain the positive learning environment.

Evaluation & Requirements of Students

Lecture Tests		60%
Lecture instructor assigned	_____	5%
Lab report		15%
Lab tests		15%
Lab instructor assigned	_____	5%

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There is NO make-up test or experiment. One lowest lab grade and one lowest test grade will be dropped. Students are also allowed to attend a different lab section, if available, with the instructor's permission for up to two times.

Class Attendance Policy

Students are required to attend all classes. In case of transportation, medical or other emergencies, relevant documentation is required to be submitted to instructor. Student should sign attendance sheet at every class.

Class Policy on Plagiarism and Academic Integrity

Plagiarism is the presentation of someone else's ideas, words or artistic, scientific, or technical work as one's own creation. Using the idea or work of another is permissible only when the original author is identified. Paraphrasing and summarizing, as well as direct quotations, require citations to the original source. Plagiarism may be intentional or unintentional. Lack of dishonest intent does not necessarily absolve a student of responsibility for plagiarism. Students who are unsure how and when to provide documentation are advised to consult with their instructors. The library has guides designed to help students to appropriately identify a cited work.

Supporting Services

Our faculty provides office hours to help students with questions. The best way to take advantage of the time is to go prepared with specific questions to ask after studying.

Name	Office	Phone	Email
Jing Huang	MS 157/MS 308	(609) 570-3429	huangj@mccc.edu
Hector Dimas	MS159/MS308	(609) 570-3338	dimash@mccc.edu
Padma Ganesh	MS159/MS308	(609) 570-3338	ganeshp@mccc.edu

Our library holds the text book for in-library use.

Our tutoring center provides tutors for Physics. Please walk over behind the bookstore to check out the tutoring schedule.

There is an open computer lab MS 211.

Campus Security

Emergency number for campus security is (609) 570-2222. The non-emergency number for campus security is (609) 570-3503. You may call security to have a classroom unlocked prior to a class. Please store these numbers in your cell phone.

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Schedule of Lecture and Experiments

Week	Dates	Experiment	Lecture Chapter & Homework	Homework Assignments
I	1/25 - 1/29 Welcome ☺	Math review & Experiments Overview	15.1, 15.2, 15.3, 15.4, 15.5	M: 1, 2, 3, 7 C: 1, 2, 3, 8, 9, 11 P: 4, 5, 10, 19, 30, 31
2	2/1 - 2/5	Electric Field 16.4	16.1, 16.2, 16.6, 16.8, 16.9	M: 1, 2, 3, 4, 7, 11, 12 C: 1, 4, 5, 8, 11, P: 1, 3, 4, 12, 26, 28, 33, 34, 35, 45, 48
3	2/8 - 2/12	Capacitors	17.1, 17.4, 17.5, 17.6	M: 6, 7, 9, 10, 11, 12, 13 C: 1, 6, 7, 8, 10 P: 11, 15a, 25, 33, 35, 37, 39, 43, 45, 47
4	2/15 - 2/19	Ohms Law	Unit Test I 18.1, 18.2, 18.3, 18.4 18.5	M: 1, 2, 3, 4, 5, 6, 8, 9, 10 C: 2, 4, 6, P: 1, 3, 5, 7, 9, 11, 13, 31, 33
5	2/22 - 2/26	Wheatstone Bridge	19.3, 19.4, 19.7, 19.8	M: 1, 2, 4, 5 C: 2, 3, 5, 12 P: 1, 3, 13, 15, 17, 43, 47, 55
6	3/1 - 3/5	Magnetometer	20.1, 20.2, 20.5, 20.7, 20.8	M: 1, 2, 4, 6, 7 C: 1, 2, 3, 5, 7 P: 1, 8, 33, 45, 46, 53
7	3/8 - 3/12	Meter Sensitivity	Unit Test 2 21.1, 21.2, 21.3, 21.6, 21.11	M: 1, 2, 3, 4 C: 10 P: 1, 2, 4, 8, 9, 13, 14, 37, 38, 59, 60
	3-15 - 3/19	Spring Break		

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8	3/22 - 3/26	AC Circuits	22.1, 22.2, 22.3, 22.4, 22.7	M: 1, 2, 3, 4, 5, 6, 7, 8, 9 C: 2, 4, 5, 8 P: 5, 7, 9, 15, 37
9	3/29 - 4/2	Index of Refraction	23.1, 23.2, 23.3, 23.4, 23.6	M: 1, 2,3,4, 5, 7, 8, 9, 10 C: 5, 7, 11, 13 P: 1, 6, 7, 9, 21, 31, 36, 38
10	4/6- 4/12 No Class Monday 4/5	Ray Tracing – Mirrors	Unit Test 3 24.1, 24.2, 24.4, 24.8, 24.9	M: 1, 2, 4 C: 2, 8, 12 P: 1, 4, 8, 16, 17, 39, 52
11	4/13 - 4/19	Lenses	25.1, 25.2	M: 3,4 C: 6 P: 5, 9
12	4/19 - 4/23	Diffraction	28.1, 28.2, 28.3, 28.4, 28.5	M: 1, 3, 4, 5, 6, 7 C: 1, 2, 8, 11 P: 1, 2, 13, 15, 27, 28, 30, 32
13	4/27 – 5/3	Polarized Light	Unit Test 4 29.1, 29.2, 29.3, 29.4, 29.5	M: 1, 3, 4, 5, 6, 7, 8, 9, 10, 11 C: 1, 3, 6 P: 1, 4, 10, 13, 19, 20, 24, 25, 33
14	5/4 – 5/10	Spectrometer	30.1, 30.2, 30.4	M: 1, 2, 5 C: 2,4 P: 1, 3, 12, 17
15	5/11 – 5/17	Radioactivity	Review & Cumulative Test 5 Chap. 15-25, 28-30	

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Spring 2010 Physics Classes

Period	Monday	Tuesday	Wednesday	Thursday	Friday
10 am					
12 am		PHY 102 Lecture 085812 085815 086403 12-1:15 MS 204 Office Hour 1:15-2:05, MS 159 Ganesh		PHY 102 Lecture 085812 085815 086403 12-1:15 MS 204 Ganesh	
2pm		PHY 102 Lab 085812 085813 1:25-3:55 pm MS 308 Office Hour 3:55-4:45, MS 308 Huang		PHY 102 Lab 085814 085815 1:25pm – 3:55pm MS 308 Office Hour 3:55-4:45, MS 308 Ganesh	

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Period	Monday	Tuesday	Wednesday	Thursday	Friday
6 pm		Office Hour 5-6, MS 308 PHY 102 Lab 086403 086404 6:00-8:40 MS 308 Huang		Office Hour 5-6, MS 170 PHY 102 Lecture 085813/085814 086404 6:00-8:40 MS 170 Dimas	

