

MERCER COUNTY COMMUNITY COLLEGE

Science and Health Professions

COLLEGE PHYSICS II

PHY 102

Lecture Hours 3

Lab Hours 3

Credits 4

Prof. Dimas

dimash@mccc.edu; (609) 570-3338

Dr. Huang

huangj@mccc.edu; (609) 570-3429

Prof. Shumila

isomorphic09@yahoo.com; (609) 570-3338

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Course Description

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

Prerequisites/Co-requisites

Prerequisite: PHY 101 and 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.

Required Text & Readings

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

Serway and Vuille: College Physics Volume II, 8th Edition

Publisher: Thompson-Brooks-Cole

Optional laboratory manual:

Cioffari: Experiments in College Physics, 10th Edition

Publisher: D.C. Heath

Calculator with trigonometrical functions is required for lecture, laboratory and tests.

Cell phones are NOT allowed during test or quiz. Using of cell phone during class in any manner is considered disruptive to class and may result in lower grade and/or student being disallowed in the classroom. The instructors are responsible to perform spot-checking of cell phones.

Calculators CAN NOT be shared during a test.

Evaluation & Requirements of Students

Laboratory: 40%

Tests: 60%

There is no make-up exam or experiment. One lowest lab grade and one lowest test grade will be dropped. In the case of excessive absences, the instructor has the option to assign WU or I grade. Students are allowed to attend a different section, if available, with the instructor's permission for up to two times.

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Class Attendance Policy

The maximum number of absences is limited to one more hour than the number of hours a class meets in one week. For example, you may be enrolled in a three-hour class. In that class, you would be allowed 4 hours of absence (not 4 days). In the case of excessive absences, the instructor has the option to lower the grade or assign an F or WU grade.

Class Policy on Plagiarism and Academic Integrity Statement

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.

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.

Campus Security

The non-emergency number for campus security is (609) 570-3503. You may call security to have a classroom unlocked prior to a class.

Emergency number for campus security is (609) 570-2222.

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Schedule of Lecture and Experiments

Week	Dates	Experiment	Lecture Chapter & Homework	Homework Assignments
1	8/31-9/4 Welcome ☺	Joules Law	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	9/7 no school 9/8-9/11	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	9/14-9/18	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	9/21-9/25	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	9/28-10/2	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	10/5-10/9	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	10/12-10/16	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
8	10/19-10/23	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

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9	10/26-10/30	Index of Reflection	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
I0	11/4-11/6	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	11/9-11/13	Lenses	25.1, 25.2, 25.3, 25.4, 25.5	
12	11/16-11/20	Diffraction	Chapter 28	
I3	11/23 (M) 11/24 (Th) 11/25 (F)	Polarized Light	Chapter 29	
I4	11/30-12/2			
	12/3-4	Spectrometer	Unit Test 4 on 24, 25, 28	
I5	12/7-9		Chapter 30	
	12/10-11	Radioactivity	Review & Cumulative Test 5	
I6	12/14-16		On All Chapters	

- The lowest laboratory grade will be dropped.
- One lowest test grade will be dropped.
- Homework solution will be available on website <http://www.mccc.edu/~huangj/>

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Faculty Schedule

Period	Monday	Tuesday	Wednesday	Thursday	Friday
10 am		PHY 102 Lecture 10:30-11:45 BS 310 Huang		Office Hour 9:30 am MS 157 PHY 102 Lecture 10:30-11:45 LA 207 Huang	
12 am					
1 pm		PHY 102 Lab 1:15-3:45pm MS 308 Dimas Office Hour 3:45pm MS 308			
7 pm	Office Hour 6pm MS 204 PHY 102 Lec 7:05-9:50 MS 204 Shumila		Office Hour 6pm MS 308 PHY 102 Lab 7:05-9:50 MS 308 Dimas		

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Action Steps for Students, Faculty, and Staff to Prevent the Spread of Flu

August 20, 2009 3:00 PM ET

The Centers for Disease Control and Prevention (CDC) recommends 4 main ways you may keep from getting sick with the flu:

1. **Practice good hand hygiene** by washing your hands often with soap and water, especially after coughing or sneezing. Alcohol-based hand cleaners are also effective.
2. **Cover your mouth and nose with a tissue when you cough or sneeze.** If you don't have a tissue, cough or sneeze into your elbow or shoulder; not into your hands.
3. **Stay home or at your place of residence if you are sick** for at least 24 hours after you no longer have a fever (100 degrees Fahrenheit or 38 degrees Celsius) or signs of a fever (have chills, feel very warm, have a flushed appearance, or are sweating). This should be determined without the use of fever-reducing medications (any medicine that contains ibuprofen or acetaminophen). Staying away from others while sick can prevent others from getting sick too. Ask a roommate, friend, or family member to check up on you and to bring you food and supplies if needed.
4. **Talk to your health care provider** to find out if you should be vaccinated for seasonal flu and/or 2009 H1N1 flu. Information about 2009 H1N1 flu vaccination can be found at: www.cdc.gov/h1n1flu/vaccination. Information about seasonal flu vaccine can be found at: www.cdc.gov/flu/protect/keyfacts.htm.

If flu conditions become MORE severe, students, faculty, and staff should consider the following steps:

. **Extend the time you stay home or at your residence** to at least 7 days, even if you feel better sooner. If you are still sick after 7 days, continue to stay home until at least 24 hours after your symptoms have completely gone away. Symptoms of flu include fever or chills *and* cough or sore throat. In addition, symptoms of flu can include runny nose, body aches, headache, tiredness, diarrhea, or vomiting.

. **Prepare for the possibility suspension of classes** by planning to continue your work at home (e.g., homework packets, Web-based lessons, phone calls), and find a place where you can stay either by going to your home, home of a relative, or close friend of the family.

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