

Class meets T Th 3-4:15p. 3 credit hours, expect to spend at least six hours per week solving homework problems and studying for tests.

Prerequisites: Physics I (1230) with grade of C or better, or Instructor permission.

Recommended (but not required) concurrent course: Physics II Lab (152L) Tuesdays, Noon-2:45p

Instructor's office times MW 1:30-3:15p, TTh 4:15-5:15p, also Th 11:45a-12:15p  
[wcmurray@unm.edu](mailto:wcmurray@unm.edu), 505-925-8727

Text: College Physics 8<sup>th</sup> ed. Vol II, (Electricity and Magnetism, Optics, and Modern Physics), by Wilson, Buffa, & Lou.  
A scientific calculator (having trig and powers-of-ten functions) is required.

*Student Learning Goals & Objectives:* To be able to explain the concepts of, and solve problems involving: Electric fields, forces, and potential (voltage); d.c. and a.c. circuits, and therefore voltage, current, resistance, capacitance, inductance, and impedance; magnetism, including electromagnets as well as permanent magnets and transformers; electromagnetic induction; electromagnetic waves. Also, be able to explain the concepts of, and/or solve basic quantitative problems involving: Quantum, atomic, and nuclear physics, recent hypotheses and observations of elementary particles and the Universe, and selected results from Einstein's relativity theory.

Policies and Notices:

*\*After four accumulated absences, the student may be dropped by the instructor without further notice.*

*\*\*"Makeup" tests will be given only at the instructor's discretion—in other words, the instructor is free to **not** give a makeup. If a makeup is given, expect a *maximum score of 85%*, because of (i) the unfair advantage of a makeup over students who took the test on time, and (ii) the additional time and effort required of the instructor in preparing, scheduling, administering, and grading the makeup. For a planned absence, speak to the Professor to see if an early test might be arranged.*

*\*Late homework.* Credit may be reduced by 50% if one day late; minus 100% if two or more days late. Homework due dates are indicated on the schedule accompanying this syllabus. Extensions may be granted if late turn-in is due to covid-related circumstances.

*\*Persistent disruptive behavior,* such as loud talking, ridiculing or intimidating the instructor or other students, or other forms of distraction, will result in the offender being dismissed and dropped from the class.

*\* Accommodations:* UNM is committed to providing equitable access to learning opportunities for students with documented disabilities. As your instructor, it is my objective to facilitate an inclusive classroom setting, in which students have full access and opportunity to participate. To engage in a confidential conversation about the process for requesting reasonable accommodations for this class and/or program, please contact me privately during office hours or at [wcmurray@unm.edu](mailto:wcmurray@unm.edu), or you may contact UNM-Valencia Equal Access Services (Sarah Clawson, Coordinator), at (505) 925-8840, email [sjclawson@unm.edu](mailto:sjclawson@unm.edu).

*\* COVID-19 Health and Awareness.* UNM is a mask friendly, but not a mask required, community. If you are experiencing COVID-19 symptoms, please do not come to class. If you do need to stay home, please communicate with me at [wcmurray@unm.edu](mailto:wcmurray@unm.edu); I can work with you to provide alternatives for course participation and completion. Let me, an advisor, or another UNM staff member know that you need support so that we can connect you to the right resources. Please be aware that UNM will publish information on websites and email about any changes to our public health status and community response.

*\*Title IX* Our classroom and our university should always be spaces of mutual respect, kindness, and support, without fear of discrimination, harassment, or violence. Should you ever need assistance or have concerns about incidents that violate this principle, please access the resources available to you on campus. Note that, because UNM faculty are considered "responsible employees" by the Department of Education, any disclosure of gender discrimination (including sexual harassment, sexual misconduct, and sexual violence) made to a faculty member must be reported by that faculty member to the university's Title IX coordinator. For more information on the campus policy regarding sexual misconduct, please see: <https://policy.unm.edu/university-policies/2000/2740.html>.

*\*Homework Format* Make the **main** prob #--**5, 11, 21**, ... (not a,b,c...) extra **BIG**. This is to help make the separation between main problems really obvious, so the instructor can find and check the main problems fast. Finally, most homework problems in physics pertain to a physical situation. For such problems, a simple **sketch** is required (It's not pure math--it's Physics.)

Homework is due on Test days, at the 1<sup>st</sup> of class. Turn in homework by chapter, do not split chapters. Only one scoring will be done per homework—on whatever is turned in 1<sup>st</sup>. Once part of a chapter is turned in, no further parts will be scored.

*\*A Formula/Equation sheet* will be provided before each test. Only minor notations on the sheet are allowed. No example problems are permitted. The Instructor may inspect any formula sheet any time during tests; if example problems or excessive notes are found, they will be confiscated, and the test grade lowered at the Instructor's discretion.

*\*Tutoring* is available, free. Hours: <https://valencia.unm.edu/campus-resources/the-learning-center/learning-center.html>  
To sign up: <https://esurvey.unm.edu/opinio/s?s=131505>

*\*Final Exam Minimum Grade* is **70%** in order to receive above a "D" in the course, regardless of other test or homework scores.

Grading:	Maximum points
Homework	100
4 tests	400
Drop lowest one of tests or homework:	-100
<b>Final exam</b> (not dropped)	<u>150</u> (min 105 (70%) to receive higher than a "D".)
	550 Max poss course total

("x" = student's total accumulated points)

$536 \leq x \leq 550$     A+    (unless a test is missed, or homework score is less than 50%)

$509 \leq x < 536$     A    (unless a test is missed, or homework score is less than 50%)

$495 \leq x < 509$     A-

$481 \leq x < 495$     B+

$454 \leq x < 481$     B

$440 \leq x < 454$     B-

$426 \leq x < 440$     C+

$399 \leq x < 426$     C

$385 \leq x < 399$     C- \*Note: a C- may not meet the prereq for some courses or requirements of some programs

$330 \leq x < 385$     D

$x < 330$     F

No "Incomplete" (I) grades will be given.