

Physics 201 - Section 03/04

Introduction to Electricity and Magnetism Fall Semester 2010

Room/Time: Seaver Hall 101 – MWF 10:00 - 10:50 am (lectures)
Seaver Hall 117/119 – T 2:00 - 4:00 pm (labs sects. **03/04** at the same time)
Seaver Hall 119 – T 10:00 am - 12:00 noon (lab sect. **08**)

Instructor: Dr. Gabriele Varieschi
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Office hours: T 4:00-5:30 pm; F 11:00 am-12:30 pm; and by appointment.
Web page: <http://myweb.lmu.edu/gvarieschi/physics.html>

Text: Serway & Jewett – Physics for Scientists and Engineers, Vol. 2 (or two volumes together) Thomson - Brooks/Cole – any recent edition: 8th, 7th (**recommended**), or 6th (E-book also available through WebAssign at an additional cost).
Also required: access to WebAssign - \$37 online access (\$62 with E-book).
Go to:
<https://www.webassign.net/student.html>
click on: “I HAVE A CLASS KEY”
enter class key: lmu 5159 6103
then set up your account in WebAssign

Objectives and Topics: From Chapter 23 to Chapter 31 (tentatively). Electrostatics. Current, resistance and D.C. circuits. Magnetism. Induced electromotive force. Electric and magnetic properties of matter. Maxwell’s equations. Laboratory experiments pertaining to electricity and magnetism. Calculus based course for engineers and scientists. Prerequisites: Physics 101- Introduction to Mechanics, Math 132 – Calculus II (or concurrent enrollment).

Learning Outcomes: Understand the phenomenology of electricity and magnetism. Understand the concept of a classical field: electric and magnetic. Be able to solve problems involving DC circuits of increasing complexity and other e.m. problems. Understand the theoretical framework provided by Maxwell’s equations. Understand the practical applications of Maxwell’s equations. This course serves as a prerequisite for PHYS 301.

Tests: There will be four tests during the semester. Your lower test grade will be dropped, so only your three best tests are counted toward the final grade. There will be **no make-up tests** given; if you miss any one of the four tests, that one will automatically be your dropped test. Tests are closed-book, but you may bring in a sheet of equations.

Test Dates: TBA

- Final Exam:* Friday, Dec. 17, 8am-10am.
The final exam is cumulative and is equivalent to 2 tests.
- Homework:* Weekly homework assignments will be given through WebAssign. Solutions will be partially discussed in class and posted online. An automatic extension can be requested in WebAssign, after the due date of each assignment (50% credit).
- Laboratory:* The laboratory is an integral part of this course. The experiments will complement the topics of the lectures. The laboratory will count for 15% of your final grade. Missing 2 or more lab sessions will result in a failing grade for the course. See lab schedule for detailed information.
DOWNLOAD LAB MATERIALS AT:
<http://myweb.lmu.edu/gvarieschi/physics.html>
- Grading:*
- | | | | |
|------------|------|---|-------------------------|
| Laboratory | 15 % | | |
| Homework | 10 % | | |
| Test 1 | 15 % |] | |
| Test 2 | 15 % |] | Three best tests |
| Test 3 | 15 % |] | out of four (see above) |
| Final Exam | 30 % | | |
- Test Grading (approx.):* <50%=F; 50-54%=D; 55-69%=C range; 70-84=B range; >84=A range.
- Academic Honesty:* Academic dishonesty will be treated as an extremely serious matter, with serious consequences that can range from receiving no credit for assignments/tests to expulsion. It is never permissible to turn in any work that has been copied from another student or copied from a source without properly acknowledging the source. It is your responsibility to make sure that your work meets the standard of academic honesty set forth in the "LMU Honor Code and Process" in the Undergraduate Bulletin 2008-2010.
- Syllabus changes:* If necessary, this syllabus and its contents are subject to revision; students are responsible for any changes or modifications announced in class.

Have a good semester. Good luck !