Physics 252L §1–6
University Physics II Lab
North Dakota State University
Fall & Spring Semesters, 1 Credit
Thursdays and Fridays, in SE316

Instructor: _____

E-mail: _____@ndsu.edu

Office Hours: _____

Covid-19 Information

We request that masks be worn in lab.

Students with medical conditions or disabilities should seek an accommodation through Disability Services: 701-231-8463.

Common sense is also required. Do not come to lab if you are sick or have been exposed to individuals who have tested positive. To protect your health and the health of your fellow students, we are continuing to provide online lab materials for remote learning.

Vaccine availability, testing, and other information can be found at NDSU's Covid Info Website.

Primary Text: Laboratory instructions provided through LON-CAPA system.
Secondary Text: Halliday, Resnick, Walker. *Fundamentals of Physics, 10th Edition.* Wiley, 2013.
Materials: Notebook, pen.

Laboratory Coordinator: Paul Omernik, South Engineering 110
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Phone: 231-7047

Bulletin Description: Electric charge, field, potential, and current; magnetic field; capacitance; resistance; inductance; RC, RL, LC and RLC circuits; waves; optics.

Note that lecture corequisites are strictly enforced. Withdrawing from the lecture course will require also withdrawing from the lab course.

Course Objective: This laboratory course is designed to complement Physics 252 by using hands-on experimentation to reinforce the theory and ideas developed during the lecture. By the end of the semester, students should have a good working knowledge of the concepts that were presented, be able to communicate these ideas effectively, and understand the importance of working in collaboration with their peers.

Class Expectations: Students are expected to attend *all* laboratory exercises and to have read the relevant material prior to each meeting. Students are expected to treat the instructor and fellow students with respect; this includes arriving to the lab in a timely fashion to avoid disturbing the class.

Students should pair off and sit *no more than two* to a table. Obvious caveats are if there are more than 24 students in the lab, or if a piece of equipment is broken and irreplaceable on short order. If you feel the desire to sit near friends, sit at adjoining tables, but the two-student-per-table requirement still exists, and each pair of students are expected to turn in their own lab.

Students are also expected to treat all lab equipment properly. This includes, but is not limited to, experiment-specific equipment, lab computers, desks, and stools. Damaging or defacing department property in any way is *not* acceptable. Students caught being malicious to equipment will be expelled from the class.

The only personal effects students are expected to provide are a pen or pencil, and a notebook. Other personal items should be kept stowed away from the lab tables. Lab rooms are active environments: people are moving around, equipment is constantly in flux, and some labs deal with liquids.

Specifically, it is department policy that phones should be silenced and put away during your time in the lab. If your phone is damaged because it was not put away, *you* are responsible for anything that happens to it.

Class Procedure: Each lab period will begin with a brief discussion of theory and ideas which are relevant to the lab, as well as an overview of the lab procedure. In order for me to keep this brief, it is necessary for you to have read the lab material before class begins.

After work on the lab has begun, I will check with each group to make sure the experiment is proceeding satisfactorily. If you have any questions during the lab or are in need of clarification, please do not hesitate to ask me immediately.

Assignments and Grading: I will grade your reports based on the demonstration of your knowledge of physics, your utilization of the scientific method, and your ability to communicate your objectives and findings, not on the error of your results. It is acceptable to have results which are what what was expected, as long as you have a reasonable explanation as to why (detailed error analysis). Your grade will not depend directly on your results, as long as you work to get the best results that you can, and understand the relevant physics. If, during the course of your experiment, you suspect your results aren't correct, please inform me—often the problem can be corrected in class.

At the end of the semester, the lab with the lowest score will be dropped from consideration in your final grade.

Your final grade in Physics 252L will be based on the following scale:

A - $\geq 90\%$
B - $\geq 80\%$
C - $\geq 70\%$
D - $\geq 60\%$
F - $< 60\%$.

Lab reports that are late by less than a week are worth half credit. Lab reports more than a week late are worth zero points. Failure to turn in one lab assignment will reduce your final grade by one letter. Failure to turn in two or more lab assignments will result in automatic failure of the course.

Attendance: Attending all lab exercises is mandatory. Make-up labs will be considered only in the case of emergencies and at the discretion of the lab instructor. Unless explicitly noted, assume class is occurring as scheduled.

Lab make-ups must be attended by your teaching assistant or arranged with another teaching assistant. Make-ups cannot be done without a TA present.

Feedback: Students are invited to share any concerns they have about the course or their performance with the instructor at any time.

Labs: An approximate list of labs are as follows:

Lab 1	Electrostatics
Lab 2	Gauss' Law
Lab 3	Electrical Measurement I
Lab 4	Electrical Measurement II
Lab 5	The Oscilloscope
Lab 6	RC Circuits
Lab 7	Transformers
Lab 7	RL Circuits
Lab 8	RLC Circuits
Lab 9	Reflection, Refraction, & Total Internal Reflection
Lab 10	Geometrical Optics
Lab 11	Optical Instruments
Lab 12	Interference & Diffraction

Any students with disabilities or other special needs, who need special accommodations in this course, are invited to share these concerns or requests with the instructor and contact the Disability Services Office (`www.ndsu.edu/disabilityservices`*) as soon as possible.*

The academic community is operated on the basis of honesty, integrity, and fair play. NDSU Policy 335: Code of Academic Responsibility and Conduct applies to cases in which cheating, plagiarism, or other academic misconduct have occurred in an instructional context. Students found guilty of academic misconduct are subject to penalties, up to and possibly including suspension and/or expulsion. Student academic misconduct records are maintained by the Office of Registration and Records. Informational resources about academic honesty for students and instructional staff members can be found at `www.ndsu.edu/academichonesty`*.*