Physics 212L §1–3 (Fall) and §1–8 (Spring)
College Physics II Lab
North Dakota State University
Fall & Spring Semesters
Tuesdays (Spring only) and Wednesdays, in SE316

Instructor: _______________________
E-mail: ________________________@ndsu.edu
Office Hours: ________________

Primary Text: Laboratory instructions provided through LON-CAPA system.
Materials: Notebook, pen.

Laboratory Coordinator: Paul Omernik, South Engineering 110
E-mail: Paul.Omernik@ndsu.edu
Phone: 231-7047

Course Objective: This laboratory course is designed to complement Physics 212 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 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.

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 assignments based on several criteria. Taken into account will be demonstration of your knowledge of the material, your ability to use the scientific method to arrive at a conclusion, and your ability to effectively communicate that conclusion. Error in your results will not affect the grade you receive, so long as you provide a reasonable explanation for the error. If you notice errors in your results during class time, please let me know and we may be able to correct the problem.

Each lab will be accompanied by a set of questions and may also include an additional homework component. Assigned work must be completed and returned one week after the associated lab period. Extenuating circumstances may allow for late homework to receive partial credit, but in general, late homework will not be accepted.

Each weekly assignment will be worth ten (10) points. The assignment with the lowest non-zero score during the semester will be dropped. Your final grade in Physics 212L will be based on the following scale: A - 90%
and above; B - 80-89%; C - 70-79%; D - 60-69%; <60%, F.

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.

**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 8  RL Circuits
- Lab 9  RLC Circuits
- Lab 10 Reflection, Refraction, & Total Internal Reflection
- Lab 11 Geometrical Optics
- Lab 12 Optical Instruments
- Lab 13 Interference & Diffraction

*Students with disabilities and/or that require special accommodations in the lab are encouraged to speak with the lab instructor as soon as possible to make the appropriate arrangements. Students’ behavior and course work are expected to meet the standards of NDSU Senate Policy, Section 335: Code of Academic Responsibility and Conduct, [http://www.ndsu.nodak.edu/policy/335.html](http://www.ndsu.nodak.edu/policy/335.html).*