Physics 212L §1 (Summer 2022)
College Physics II Lab
North Dakota State University
1 Credit
In-Person & Online: Mondays and Wednesdays

Instructor: Noah Seekins

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Office Hours: _____

Primary Text: Video laboratory theory and data collection provided through LON-CAPA system.
Secondary Text: Giordano. *College Physics: Reasoning and Relationships*, 2nd Edition. Brooks Cole, 2013.
Materials: Computer access to watch laboratory theory and data collection.

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

Bulletin Description: Second course for students without a calculus background. Includes electricity, magnetism, optics and modern physics.

Course Objective: This laboratory course is designed to complement Physics 212 by providing videos of experiments 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 watch *all* laboratory exercises. Reading the relevant material prior to watching each video will help greatly. Students are expected to treat the instructor and fellow students with respect.

This summer there will be no in-person meetings.

Class Procedure: Each experiment video 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. If you have read the lab material before class begins, your understanding of the theory and subsequent data collection will be enhanced.

If you have questions after reading the material and watching the theory and data collection, please feel free to contact me by e-mail or video if we can arrange it.

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. These questions 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 fully-completed lab with the lowest non-zero score during the semester will be dropped. Failing to follow the lab procedure to completion is a zero, and will not count toward the dropped lab.

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 labs will result in a zero on those assignments.

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

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.