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 251 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 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 report with the lowest score will be dropped from consideration in your final grade.

Your final grade in Physics 251L will be based on the following scale: A - 90% and above; B - 80-89%; C - 70-79%; D - 60-69%; <60%, F.
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.

**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  Measurements & Graphing
- Lab 2  Linear Motion
- Lab 3  Superposition of Forces
- Lab 4  Elastic & Inelastic Collisions
- Lab 5  Friction
- Lab 6  Center of Mass & Rotational Motion
- Lab 7  Torque
- Lab 7  Moment of Inertia
- Lab 8  Buoyancy & Density
- Lab 9  Gravity at the Earth’s Surface
- Lab 10  Simple Harmonic Motion
- Lab 11  The Physical Pendulum

_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._