Physics 110L §1–2
Introductory Astronomy Lab
North Dakota State University
Fall Semesters
Mondays in SE316

Instructor: __________________________
E-mail: __________________________@ndsu.edu
Office Hours: __________________________

Primary Text: Laboratory instructions provided in astronomy programs, and through LON-CAPA system.
Secondary Text: __________________________
Materials: Notebook, pen.

Laboratory Coordinator: Paul Omernik
E-mail: paul.omernik@ndsu.edu
Phone: 231-7047

Course Objective: This laboratory course is designed to expand upon some of the concepts learned in Physics 110 by using computer simulations 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.

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 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 110L 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  Angular Size
- Lab 2  The Scale of the Universe
- Lab 3  Circumpolar Stars
- Lab 4  The Celestial Sphere
- Lab 5  Eratosthenes’ Method - Measuring a Planet
- Lab 6  Orbital Motion of the Moon
- Lab 7  The Classification of Stellar Spectra
- Lab 8  Flow of Energy out of the Sun
- Lab 9  Eclipsing Binary Stars
- Lab 10 HR Diagrams of Star Clusters
- Lab 11 Dying Stars and the Birth of Elements
- Lab 12 Spectroscopic Parallax

*Given the broad scope of Physics 110, labs are subject to change.*

*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).*