

- **Course Number and Title:** PHYS 1310L. Calculus-Based Physics I Laboratory
- **Catalog Description:** A series of laboratory experiments associated with the material presented in Calculus-based Physics I. Students will apply the principles and concepts highlighting the main objectives covered in coursework for Calculus-based Physics I.
- **Credit Hours:** 1 Credit (3P)
- **Prerequisite(s) / Corequisite(s):** Prerequisite(s) / Corequisite(s): PHYS 1310G
- **Required:** Required for BSME and BSAE Degrees
- **Course Availability:** Fall and Spring Semesters (+ Summer)
- **Instructor (Usual):** Dr. Thomas Hearn
- **Textbook:** Laboratory assignments were designed by NMSU Physics and are distributed through CANVAS
- **Course Learning Objectives:** After completing this course, a student should be able to:
 - 1) Develop a reasonable hypothesis.
 - 2) Work effectively as part of a team.
 - 3) Take measurements and record measured quantities to the appropriate precision.
 - 4) Estimate error sources in experimental techniques.
 - 5) Apply appropriate methods of analysis to raw data, including using graphical and statistical methods via computer-based tools.
 - 6) Determine whether results and conclusions are reasonable.
 - 7) Present experimental results in written form in appropriate style and depth.
 - 8) Experience the relationship between theory and experiment.
- **Topics Covered:** Teamwork; dimensional analysis; one-dimensional kinematics; vectors, two-dimensional kinematics, Newton's laws of motion; work and energy; momentum; rotational kinematics, dynamics, and energy; oscillations