

Abstract Submitted
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The Advanced Lab Course at the University of Houston REBECCA FORREST, University of Houston — The University of Houston Advanced Lab course is designed to help students understand the physics in classic experiments, become familiar with experimental equipment and techniques, gain experience with independent experimentation, and learn to communicate results orally and in writing. It is a two semester course, with a Lab Seminar also required during the first semester. In the Seminar class we discuss keeping a notebook and writing a laboratory report, error analysis, data fitting, and scientific ethics. The students give presentations, in pairs, on the workings and use of basic laboratory equipment. In the Lab courses students do a one week introductory experiment, followed by six two-week experiments each semester. These range from traditional experiments in modern physics to contemporary experiments with superconductivity and chaos. The students are required to keep a laboratory notebook and to write a four-page paper for each experiment in the publication style of the American Institute of Physics. This course introduces students to the experimental tools and techniques used in physics, engineering, and industry laboratories, and allows them to mature as experimentalists.

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