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Physics Experiments in the Electronics Lab Course EVERETT RAMER, University of Delaware — A total of 12 experiments representing mechanics, heat, sound, electricity, and light were added to the electronics lab course for physics majors between the instructional material on analog and digital electronics, and the student-initiated end-of-semester projects. The goals were to provide projects that reviewed and reinforced material studied throughout the semester, and to demonstrate that this material can be useful in the laboratory setting. The experiments were simple, each one was completed by a single student during a single three-hour lab session. They were specifically designed to use the same circuits and Arduino sketches the students had constructed during the instructional portion of the course. For example, a phototransistor circuit from the BJT analog lab was combined with an interval-timing Arduino sketch from one of the digital labs to measure the gravitational acceleration of a falling "picket fence." Student response was very positive, often citing appreciation for the wide range of physics experiments that could be performed with only a handful of very simple circuits and Arduino sketches.

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