

Abstract Submitted
for the SES11 Meeting of
The American Physical Society

What is the purpose of undergraduate physics labs?¹ WILLIAM SAMS, North Carolina State University, MICHAEL PAESLER, CLIFF CHAFIN — In recent years, enrollment in undergraduate physics courses at NC State has grown significantly, especially in introductory physics. Since most of these courses involve a laboratory component, the increased enrollment is leading to a shortage of laboratory space. Starting this spring NC State will implement kit labs in calculus-based mechanics labs. These kits will make it possible for students to have laboratory experiences outside of the standard lab rooms, decreasing space demands. During the implementation the kit labs will be evaluated with an instrument developed for this purpose. This paper discusses the first step of designing this instrument, determining what the specific goals and purposes of the labs are. Literature reviews have led to focus on three primary areas where students should make gains during lab: content knowledge, scientific process, and affect. Physics faculty members were surveyed to identify specific areas considered important for our labs. Using results from our survey and published literature we have developed a specific set of goals for our labs, and we are using this to guide the development of our assessment instrument.

¹NC State DELTA Large Course Redesign Pilot Grant

William Sams
North Carolina State University

Date submitted: 12 Sep 2011

Electronic form version 1.4