

Abstract Submitted  
for the MAR07 Meeting of  
The American Physical Society

**Teaching Laboratory and Research Skills as Preparation for Careers in Science and Education**<sup>1</sup> BRIAN THOMS, Georgia State University — Recipients of bachelor's degrees in physics have identified lab skills, team work, and research skills as abilities necessary for success in their jobs. However, they also report having received less than adequate preparation in these areas during their college careers. We report on the redesign of a junior physics-major modern physics laboratory course into an inquiry-based, research-like laboratory course. The overall strategy was such as to require the students to approach the experiments in a research-like fashion. In addition, experiments which explore materials properties which can't be looked up in textbooks, e.g. Hall Effect, have been added to further emphasize a research-like approach to the investigations. Laboratory reporting requirements were written to closely reproduce current practices in scientific journals. Assessment of the redesign was performed through surveys of current and graduated students and through comparison of laboratory reports.

<sup>1</sup>This work is supported by the National Science Foundation through the Georgia Partnership for Reform in Science and Mathematics.

Brian Thoms  
Georgia State University

Date submitted: 20 Nov 2006

Electronic form version 1.4