

Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Examining student performance in an introductory Physics for engineering course: A quantitative case study.¹ DIEGO VALENTE, AMIT SAVKAR, FRIDAH MOKAYA, University of Connecticut, JAMES WELLS, Keck Science Department of Claremont McKenna, Pitzer, and Scripps Colleges — The Force Concept Inventory (FCI) has been analyzed and studied in various ways with regards to students' understanding of basic physics concepts. We present normalized learning gains and effect size calculations of FCI scores, taken in the context of large-scale classes in a 4-year public university and course instruction that incorporates elements of Just-In-Time teaching and active learning components. In addition, we will present here a novel way of using FCI pre- and post-test as a predictor of students' performance on midterm and final exams. Utilizing a taxonomy table of physics concepts, we will look at student performance broken down by topic, while also examining possible correlations between FCI post-test scores and other course assessments.

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Date submitted: 11 Nov 2016

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