

Abstract Submitted  
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**Raising Standards and Expectations in a College Physics Classroom: An Invitational Approach** VANDANA SINGH, Framingham State University — This poster describes the results of an alternative pedagogical approach in a calculus-based college physics classroom at Framingham State University in Spring 2012, where the majority of students were pre-medical or pre-engineering students, or chemistry majors. The approach incorporated elements of the invitational or promising syllabus as described by educator Ken Bain, as well as an interdisciplinary approach to understanding physics concepts, and was informed by the work of educational psychologist Carol Dweck. The “promise” or invitation that began the course was that students would understand how uncertainties, errors and mistakes occur in the real world, with particular emphasis on engineering and medicine, and what methods, skills, and habits of mind can minimize error. Results are discussed. The small sample size makes statistics-based conclusions impossible to generalize, but the study is suggestive of the potential benefits of a rigorously high-standard, process-oriented, interdisciplinary and real-world-connected approach to teaching physics to future engineers and doctors.

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