Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Initial experience with a calculus-based IPLS course at Vanderbilt M. SHANE HUTSON, ERIN C. RERICHA, Vanderbilt University — By implementing research results from the PER community, we have designed a new calculus-based IPLS course and began teaching two sections of this course in Fall 2013, both taught by biological physicists. This course differs from Vanderbilt's other introductory physics offerings in two major ways. First, it seeks to implement PER-based active learning strategies including just-in-time teaching, peer instruction and context-rich problems. The latter are specifically designed within biomedical contexts. Second, the course content has been chosen to closely align with the core competencies delineated in the HHMI-AAMC report *Scientific Foundations for Future Physicians*. We provide students with a very explicit accounting (in the syllabus) of how this course will contribute to 5 of the 8 *SFFP*-competencies and 21 of its 37 learning objectives. Throughout the course and associated labs, we make repeated, explicit and hopefully authentic connections between physics and the life sciences. The chosen text reinforces our approach through well-developed biomedical applications of physics concepts. We will report what we've seen work and not work in our first implementation of an IPLS course and detail results regarding student learning and student attitudes towards physics.

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Date submitted: 15 Nov 2013 Electronic form version 1.4