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ReDUCE: Rethinking Directions in Undergraduate Curriculum Experiences CARLOS WEXLER, DEBORAH HANUSCIN, MATTHEW MOWER, HASKELL TAUB, University of Missouri — There is a major emphasis in higher education on rethinking undergraduate science instruction, particu-larly in introductory courses. In Fall/2007 a collaborative team at the University of Missouri formed and was given a "green light" to start an overhaul of the curriculum and instruction of (algebra-based) Physics I and the associated laboratory/recitation, a course taken by $>$ 500 students/yr. Earlier, we had identified problems with the current status of the course: the number of topics "crammed into the syllabus," disconnectedness of laboratories to each other, and lack of conceptual coherence between laboratory, recitations and lectures. In Spring/2008, the group was awarded an interdisciplinary grant from the College of Education to begin work on realigning the lecture, lab, and recitation components of the course around a coherent curriculum that builds towards "big ideas" in the discipline (a "narrow but deep" approach). In Fall/2008 we implemented the first pilot test by combining exploratory labs, "take-home-minilabs," and the use of Tutorials (in one section of the lab of this course, ca. 20 students). In this talk I will discuss early results and conclusions of this experiment, the next steps in the academic transformation, funding issues, and hurdles faced towards implementation on larger scale.

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