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Leading institutional change: Implementing Studio in physics and beyond PATRICK KOHL, H. VINCENT KUO, Colorado School of Mines — The Colorado School of Mines (CSM) teaches its first-year calculus-based introductory physics courses (Physics I and Physics II) using a hybrid of lecture and Studio physics. This model was first implemented in Physics I in 1997, and was established in Physics II in the fall of 2007. In this talk, we highlight the stages of the transformation from traditional to Studio, highlighting what has worked and what has not, and describing methods for assessment and evaluation. Results suggest that Studio has increased student performance and satisfaction despite an aggressive expansion of class sizes in the past few years. Gains have been concentrated mostly in problem-solving skills and exam performance (as opposed to conceptual survey gains), in contrast to what has sometimes been seen in other studies. Most recently, we as a department have been capitalizing on our successes with Studio physics to take a leadership role in disseminating advanced educational methods throughout CSM, both vertically (into upper division physics courses) and horizontally (into various departments outside of physics). We will briefly describe progress so far.

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