

Abstract Submitted
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Summative Evaluation of Polymers, Composites & Sports Materials: An Introduction to Chemistry and Physics.¹ ERIC HAGEDORN, UTEP Physics, MILIJANA SUSKAVCEVIC TEAM, DAVID CHAVEZ TEAM — During Fall 2007, 70 pre-science freshman completed a one-credit science course with three goals: 1) enhance and maintain student interest in science majors while completing necessary prerequisite mathematics courses, 2) provide students with a solid content & mathematical foundation for introductory physics and chemistry, and 3) pilot hands-on activities developed for the Materials World Modules program. Eight pre/post quizzes, along with a midterm and final were used to assess student learning. Traditional course evaluations were supplemented with completed SALG (Student Assessment of Learning Gains) instruments. Analysis of these data indicated the following: 1) on 6 out of 7 pre-post quizzes, students showed statistically significant gains with medium or large effect sizes, 2) while students who completed the SALG instrument found all aspects of the course helpful, the hands-on activities were not as helpful as intended, and 3) logistical issues had the most detrimental impact on this course. The evaluation results have led to a number of changes for the Fall 2008 offering of this course.

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