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**Jon Paynter\***, Department of Mathematical Sciences, United States Military Academy, West Point, NY. *Remodel Your Differential Equations Course.*

Traditional differential equations courses emphasize solution techniques, and along the way introduce application problems. This talk outlines a way to transform a differential equations course by using application problems as the primary mode of introducing and reinforcing ODE concepts. Methods include the use of dedicated lessons for scenario introduction and modeling, in-class application assessments, modeling based course projects, and adjusted homework assignments. Specifically, this talk highlights the use of homework assignments that emphasize model construction in lieu of practicing isolated solution techniques. Throughout the course, we collected data on assessment performance and student perception to compare sections with and without these homework assignments. The talk includes details about two of the assignments and the results of the study. Results indicate that instructor emphasis on modeling approaches increases students' ability and confidence in modeling, with no loss in students' performance of traditional solution techniques. (Received September 16, 2016)