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Nathan Pennington* (nathanpennington@creighton.edu), 2500 California Plaza, Omaha, NE 68178. *Modeling in an Integrated Mathematics and Physics course.*

Modeling the Physical World is a year long project-based integrated Mathematics and Physics course aimed at advanced incoming first-year students. While the students receive credit for Calc II/Calc III and General Physics I/II, many of the projects require the use of differential equations and would be suitable for a differential equations class. In this talk we discuss the structure of the course, finding compelling modeling problems, and ideas for incorporating modeling with differential equations into a variety of courses. (Received July 26, 2017)