1116-K1-422   **Ricardo Cortez*** (`rcortez@tulane.edu`), Mathematics Department, Tulane University, New Orleans, LA 70118, and **Cynthia O Anhalt** (`canhalt@math.arizona.edu`), University of Arizona, Mathematics Department, 617 N. Santa Rita Ave., Tucson, AZ 85721. *Design and Implementation of an Undergraduate Mathematical Modeling Course with no College Prerequisites.*

Most mathematical modeling courses are at the upper-division level. Students build their mathematical knowledge (e.g. linear algebra, ODEs, numerical methods, probability) and develop a broad background before being exposed to modeling. In contrast to this paradigm, a new course, Understanding our World Through Math Modeling, was offered at Tulane University in 2015. The goal of the course was to expose students to the modeling process as a way to describe, explain, understand or predict situations arising in everyday life. The course was open to all undergraduates; was problem-driven; and required group work, written reports and frequent presentations. Examples of situations included settling discrepancies on the number of sand bags needed to raise a river bank, predicting the number of daylight hours at different cities, analyzing the consequences of child support payment formulas, and estimating the capacity of trees to capture sunlight energy from leaf size data. Students created models based on their knowledge and learned new content. The modeling process emphasized making assumptions, translating the situation into mathematical language, drawing and validating conclusions in context, and revising assumptions. I will describe the benefits and challenges of this course. (Received August 31, 2015)