A year’s experience with implementing a data modeling based course at the College Algebra level. Functions and Algebra is in its second year of the general education curriculum at Lindsey Wilson College. Content familiarizes students with standard mathematics functions. These include polynomial, rational, exponential, logarithmic and trigonometric functions. The course uses a data modeling approach to introduce and to utilize the functions. There is a large emphasis on the algebra needed to transform data to fit linear models and little emphasis on factoring algebraic expressions. Technology is utilized to perform matrix arithmetic to solve interpolation and least squares problems. During the fall semester of 2009, student performance matched that of general education courses in other disciplines. This was not the case, however, in the spring of 2010. Achievement was far below other courses. In this talk the author will outline the curriculum highlighting example problems taken from practitioners, explain the motivation for the curriculum, summarize success rates, speak to tutoring issues, relay thoughts on placement and discuss reluctance of faculty. (Received September 20, 2010)